Refitted Metroliners: Prototypes for upgrading the fleet?

May 12, 1975

RAILWAY AGE

Coal by pipeline: How real a threat?

For BART, a slow order

MOVING PEOPLE

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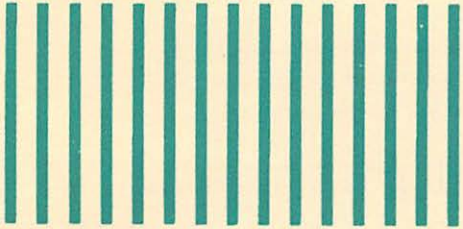
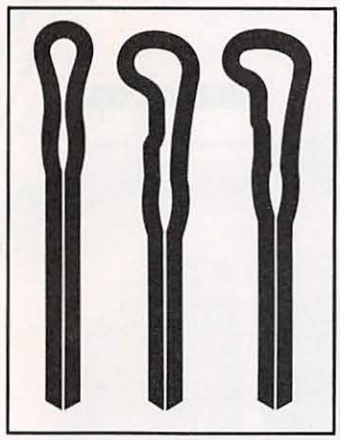


Bethlehem Lock Spikes help retain rail gage on curves



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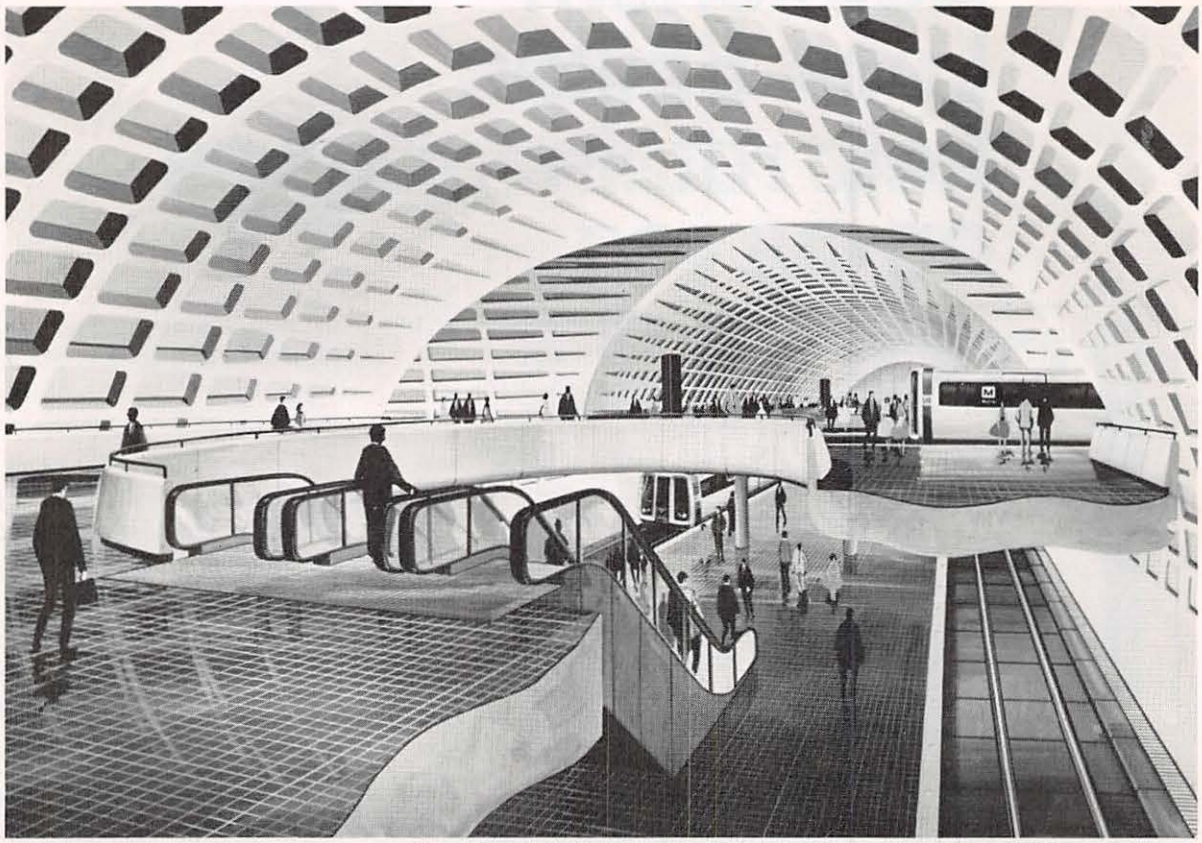

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Inside

LUTHER S. MILLER

A PROBLEM OF CLASS

Amtrak is, by the ICC's definition, a Class I railroad—that is to say, a common carrier by rail grossing more than $5 million a year. While it owns neither rail nor road, Amtrak does own 2,000 railroad passenger cars and 400 locomotives which last year brought in enough revenue to earn this quasi-public corporation a No. 17 ranking among the nation's Class I carriers.

But in the railroad business, Class I does not always mean first class. Senator Vance Hartke (D.-Ind.) may have overstated the case recently when he expressed his sympathy for Amtrak travelers with the despairing comment, "If cleanliness is next to godliness, these poor people are on the edge of hell." But many Americans—including some high-ranking officers at Amtrak—share the Senator's feeling that Amtrak has a long, long way to go before it can offer its customers really first-rate service on any consistent and uniform basis.

One of these is Paul H. Reistrup, who recently relinquished the job of senior vice president-operations at the Illinois Central Gulf to become president of Amtrak. Reistrup has ridden more Amtrak trains in recent weeks than Senator Hartke (31 trains in 60 days, to be precise). He is therefore more temperate in his criticism than Hartke, whose particular *bete noire* is the "James Whitcomb Riley," which is not one of Amtrak's showcase trains. But Reistrup—appearing on the same CBS "60 Minutes" show that gave Senator Hartke a forum on May 4—did say with candor: "It will take five years and billions of dollars before I can really be proud of Amtrak."

What Reistrup thinks must be done in those five years—and how he proposes to spend some of those billions of taxpayer dollars, provided Congress is willing to supply them—is the subject of the article which starts on p.24.

ONE CAR ORDER, 1400 SUPPLIERS

One thing can be said for Amtrak: It is far more important on the railway scene today than nearly anyone thought it would be just a few years ago. Amtrak is, for example, the biggest single capital spender in the railway marketplace with an order backlog that is currently in the half-billion-dollar neighborhood. What this means to suppliers is indicated by some statistics recently compiled by the Budd Co., which has just begun delivering an order for 492 Amtrak cars. Construction of these cars will require, says Budd, 1,297,600 Budd-made parts (of 3,200 different types), plus 15,096,036 purchased parts (of 3,250 different types). A total of 1,403 suppliers are participating in the order. Some of the major items going into the 492 Budd cars: 40,688 seats, 6,322 tons of stainless steel, 4,872 tons of carbon steel, 3,400 miles of electric wire, 194 miles of steel pipe and conduit, 57 miles of copper tubing, 200 miles of aluminum extrusions, 108,240 square yards of carpeting, 2,678,000 square feet of insulation, 5,900 tons of air conditioning, and 2,402,000 watts of lighting.

BART: ONE BIG PLUS

Bay Area Rapid Transit continues to experience major problems; they are candidly explored by Contributing Editor William D. Middleton in this issue (p. 18). But Middleton suggests that BART's critics not forget one big plus point which the system has scored: "BART has carried more than 42 million passengers without a serious injury or fatality to a single one of them. And, moreover, these passengers have enjoyed a transit service quality that, as yet, is unequalled anywhere in the world."

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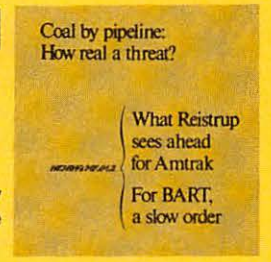
FEATURES



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Short and Significant

CAR ORDERS AND DELIVERIES GO UP

Orders were placed for 4,021 new freight cars in March, compared with 2,031 in February and 10,514 in March 1974. All cars ordered in March will be built by commercial builders. New freight cars delivered in March totaled 6,947 (of which 153 were built in railroad shops), compared with 5,699 in the preceding month and 5,378 in March 1974. The backlog of new cars on order and undelivered on April 1 was 78,191 (of which 10,719 will be built in railroad shops), compared with 83,028 on March 1 and 79,725 on April 1, 1974.

RAILROAD EMPLOYMENT DOWN SHARPLY

Class I railroads employed 495,916 people in mid-March, a drop of 5.5% from the March 1974 figure. Hardest hit by the recession have been employees in the transportation (train and engine service) category, where the decline has been 7.99%. Other employee groups whose ranks have been thinned include: professional, clerical and general, down 2.96%; maintenance of way and structures, down 5.43%; maintenance of equipment and stores, down 5.36%; transportation (other than train, engine and yard), down 7.05%; transportation (yardmaster, switchtenders and hostlers), down 2.11%. The only employee category showing an increase was that which includes executives, officials and staff assistants, up 1.09%.

MOPAC BACKING "SYSTEM" TRANSPORTATION

Missouri Pacific is still beating the drums for creation of multimodal transportation companies, combining services that now compete. This is an idea advanced several years ago by MoPac Chairman Downing B. Jenks, and it's very much alive with MoPac people today. As George A. Craig, assistant vice president-sales and service, noted recently, "I have an idea that if we were to sit down with a fresh slate and plan a national transportation system we would not even consider the mess we have today. It would not even occur to a rational man to set up today's system of totally separate modes locked in Darwinian struggle with one another for survival." To be sure, he said, some modes—highway and air—weren't around when the "system" first took shape: "But today we no longer have that excuse. We know what is available to us. We know how to meld the strengths of the various modes into an even stronger whole."

SYMBOLISM AT A COAL MINE

At the dedication of a new coal mine near Hanna, Wyo., and a companion unit-train service, the main props were two bottles—one filled with water, one with oil. Said Union Pacific President John P. Kenefick, whose railroad will operate the unit trains: The water-filled bottle "calls attention to the fact that coal from this mine will be transported to its destination without the use of Wyoming's precious water resources," while the oil-filled jug symbolizes "the critical importance of low-sulphur Wyoming coal as an alternate fuel in reducing the nation's energy dependence on foreign oil." The Medicine Bow mine is a joint venture of Arch Mineral Corp. and Rocky Mountain Energy Co. Production will be about three million tons per year over the next 10 years, with rail deliveries to utilities in Indiana, Iowa and Kansas.

NEW DIESEL SHOP FOR MILWAUKEE

Milwaukee Road is building new locomotive servicing facilities at St. Paul which will permit washing, fueling, servicing and performance of minor repairs on a run-through, production-line basis. Major repairs will continue to be done in the shop-area roundhouse, which will be equipped with a new drop table and wheel-truing lathe.

A GOOD-LOOKING VENTURE GONE

Those who want to take over unprofitable branchlines and operate them had maybe better take a look at the Great Plains Railway, launched in Nebraska last June with champagne and all sorts of dignitaries. This was an 87-mile ex-Chicago & North Western line taken over by a local group and financed through sale of stock and funding by the Small Business Administration. There were high hopes. But, as of mid-April, the Great Plains wasn't operating and the whole proposition was undergoing a reassessment. Grain, the main reason why local people wanted to keep the line open, wasn't moving. By one report, expenses were about three times revenues and the line needed $500,000 or more in track-and-roadway repairs. At the outset, there were estimates that farmers served by the Great Plains might save as much as $1 million a year in transportation costs if rail service could be continued.

AMSCO ACQUIRES ANDERSON, IND., PLANT

Abex Corp.'s Amsco Division has acquired a plant at Anderson, Ind., and will develop it primarily for the manufacture of manganese steel castings used in switches and crossings. Formerly owned by the Copper Range Co., the 50-acre site includes a 135,000-sq-ft manufacturing facility and a separate office building. Amsco's new plant will go into operation this year; it will eventually employ some 250 people.

PAN-AM CONGRESS SET FOR CARACAS

The XIII Pan-American Railway Congress is now scheduled to be held in Caracas, Venezuela, sometime during the last two weeks of November 1975. Precise dates and other details of the meeting are to be announced later.

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EMD unveils its first all-electric unit

General Motors' Electro-Motive Division celebrated May Day by rolling out its first all-electric locomotive—with all the confidence in the world in what the 6,000-hp GM6C will be able to do, though with maybe a bit less confidence in the market in which the GM6C may be doing it. In any event, this first unit is headed for Penn Central for tests, to be followed in 1976 by a big-brother, a 10,000-hp GM10B which EMD will soon be building.

Actually, the GM6C doesn't look at all different from the diesel-electrics turned out by LaGrange—except, of course, for the pantograph and the clutter atop the cab end of the unit. It represents, however, a successful first application of American and Swedish technology, GM/EMD and ASEA, and these are some of the key features built into it:

—Full-range speed and power control using oil-cooled thyristors, a first for the U.S. Thyristor circuitry eliminates the need for any mechanical transformer tap changes or power contactors and voltage control is accomplished by static devices.

—Availability of five different types of throttle control, including the typical constant-horsepower diesel-electric type with eight throttle steps (this to facilitate m-u operation with diesels); constant-tractive effort controls which result in the throttle's controlling the actual tractive effort regardless of speed; and various combinations of the diesel-electric type and the constant-tractive-effort type, whatever best suits the railroad's train-handling.

—An advanced type of wheel-slip control which utilizes individually-controlled traction motors. EMD expects that the GM6C "will permit substantially higher adhesion levels than now available on locomotives, although we recognize that improved technology can be developed for diesel-electric locomotives to provide the same degree of improvement in adhesion capabilities."

—Oil-cooling of main transformer and traction motor reactors, for minimum maintenance and longer life.

—Design features to reduce auxiliary power demands. The motor alternator drive set which handles auxiliary loads and ventilating air can be reduced in speed or shut down when the locomotive is, for example, waiting on a siding.

—Dynamic braking. Thyristor control, EMD notes, does permit the use of regenerative braking and where there are high braking energies available it is possible to return the braking power into the catenary to minimize energy requirements.

—High-adhesion three-axle trucks, with 42-inch wheels. Design provides for sealed, grease-lubricated roller suspension bearings; new high-capacity gearing is provided, along with a more rigid, high-strength gear case to minimize leakage of lubricant.

—Control circuitry borrowed from the Dash-2 diesel-electrics, with modular design to simplify maintenance and improve reliability.

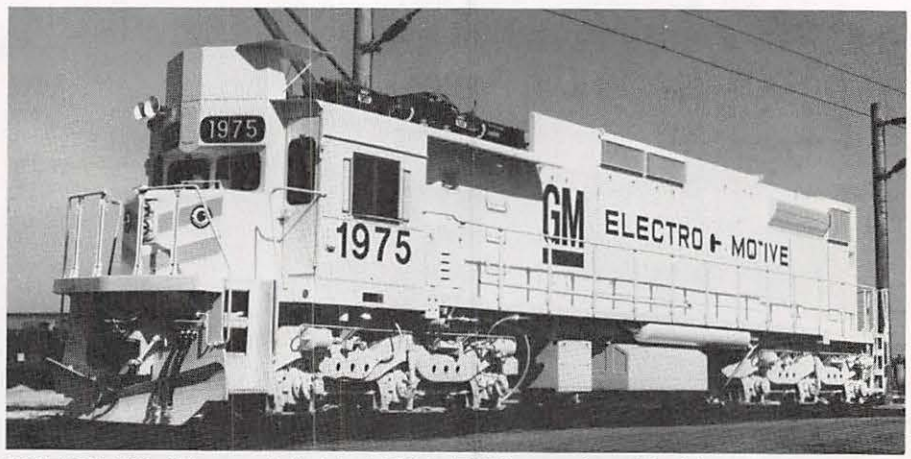
—New E-88 traction motors which utilize many of the features of the D-77 traction motor but which also incorporate the grease-lubricated roller suspension bearings, laminated interpoles, separately excited fields and a new armature winding which permits higher ratings and lower operating temperatures.

—Availability of automated speed control.

Geared for 70 mph maximum speed, the GM6C is primarily designed for relative-low-speed, heavy-drag operation. The GM10B, when it comes along next year, will be built for high-speed, long-distance freight service.

VITAL STATISTICS ON THE GM6C

Horsepower (diesel equivalent)	6,000
Continuous tractive effort	97,000 pounds rated, 125,000 pounds short-time overload rating
Maximum speed	70 mph
Weight	365,000 pounds, can be ballasted to 420,000 pounds
Distance between coupler pulling faces	68 ft, 10 in.
Truck wheel base	13 ft, 7 in.
Distance between bolster centers	43 ft, 6 in.
Width over cab sheeting	10 ft
Height over locked-down pantograph	14 ft, 11 in.
Drive	six motors, six pair of 42-in. driving wheels



FIRST OF TWO: This new all-electric, 6,000-hp EMD locomotive will be followed early next year by a 10,000-hp unit; both are designed for freight service.

● **Economics and the market.** What about the market? Well, aside from the Black Mesa & Lake Powell and the Muskingum Electric, electrification in the U.S. today means Penn Central. But EMD thinks it may—*may*—not always be that way, and that is the "why" of the decision to build two prototypes.

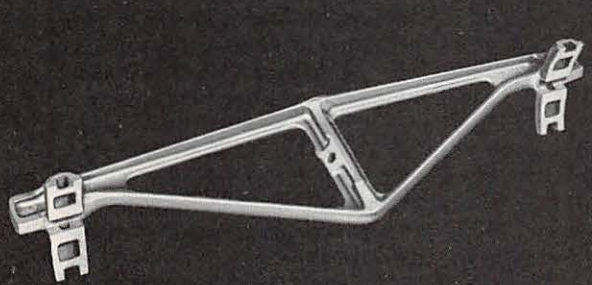
Peter K. Hoglund, vice president of GM and general manager of EMD, sees both sides of the question.

"Electrification is getting a new look because of concern in two important areas, energy availability and ecology.... Obviously, a wide choice of fuels is one of the principal advantages in any electrification proposal, especially in light of the uncertainty prevailing today in both price and supply of petroleum products. Coal and nuclear sources of energy offer appealing alternatives.... From the ecology standpoint, the electric has no emission problems, these problems having been transferred to the central generating station supplying its electrical energy, and the electric locomotive ostensibly can make a contribution in reduced noise pollution because of the absence of the individual diesel engine as a prime mover.... Another argument advanced on behalf of

(Continued on page 12)

ASF BRAKE BEAMS-

are always on the beam!



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Watching Washington

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RSPO vs. USRA

To nobody's very great surprise, the Interstate Commerce Commission's Rail Services Planning Office returned a verdict sharply critical of the United States Railway Association's preliminary systems plan. In fact, the introduction to the RSPO critique said the USRA effort "is really more of a report or commentary than a plan."

According to RSPO, USRA's plan is not specific enough in designating which lines and parts of lines would be included in the Consolidated Railroad Corporation mandated by the Regional Rail Reorganization Act; not clear on which branch lines should be abandoned; and not clear on where the money for its proposed system is going to come from.

What lies behind the RSPO criticism? In some measure, the same thing that lies behind everything else in Washington: politics. At a time when the whole complex of Federal regulatory agencies is coming under attack, no agency has been attacked as sharply as the ICC. In this context, the RSPO critique is a sign that there is still life in the Commission. In addition, RSPO input into the planning process included extensive public comment gathered at hearings sponsored by the planning office. These comments have touched on some political, social and economic realities that the USRA effort by its nature could not embrace.

THE SPECTER OF NATIONALIZATION

At this point, however, there is a logic and justification for the RSPO critique that goes beyond the politics of survival and the demands of a different data base. The whole question of railroad reorganization has gone beyond what it was a few years ago. Today, the issues involved in the midwest and northeast have become closely bound up with wider debates over national purpose. Is the free enterprise tradition so valuable that its image should be kept intact when its substance has—in the case of some railroads, at least—been shattered? Is the specter of nationalization more to be feared than the prospect of a collapse in vital transportation facilities? Who should pay the bill for "public" services: the general public, or the public that actually benefits from a service, or both?

These are questions being asked about all kinds of services. These are questions that have their roots in the simple realization that our economy is not what it once was, and in the complex fact that the United States has been built on a delicate web of compromises, a web that trembles as the compromises dissolve.

MORE THAN RAILROADS ARE INVOLVED

In this context, the RSPO critique takes on a value greater than its content. It becomes part of a continuing debate not only about railroads, but about other issues facing the country. It stimulates the information input needed for new understandings, and the understandings needed for new compromises. Right now, the batting back and forth of all this public opinion and learned analysis might not be doing much to improve freight service to Ashtabula. But it might provide the new partnership obviously needed to give the railroads not only the stable roadbeds they need now, but the philosophical mandate, they—and other providers of public service—will need in the years ahead.

(Continued from page 10)

electric locomotives is reduced maintenance costs, derived primarily from elimination of the diesel engine, which accounts for roughly 50% of the annual maintenance costs of present d-e units."

Negative aspects? Well, "the huge capital investment required...stands as the No. 1 problem—the enormous outlay for a catenary system, variously estimated at $80,000 to $100,000 per mile, and the additional investment required to procure a fleet of electric locomotives."

Too, Hoglund notes, "any investment in electrification carries with it the long-term problem of return on investment. Our studies indicate that the r-o-i in electrification is influenced markedly by relative costs of diesel fuel and electrical energy, but under the most favorable assumptions where traffic density is high, the resulting return on investment appears modest and occurs only after a long period."

Risks are also compounded by uncertainty as to national energy policy, the difficulty of accurately predicting future traffic, and "the problem of generating capacity required to meet electrification demands—a formidable problem today in view of the current plight of the electric utility industry."

Finally, there is the possibility of reduced oil prices. Last November, the Federal Energy Administration indicated that "world oil prices are highly uncertain and could decline to about $7 per barrel, FOB U.S., and might fall somewhat lower." Should this happen, says Hoglund, "then obviously the economics of electric versus diesel-electric would change significantly."

- **"No case"—and yet...** As a matter of fact, detailed economic studies made by EMD, its general manager says, "indicate that the over-all costs of owning and operating electric locomotives may actually be greater than operating diesels." Even under favorable conditions, "no case can be made to support a major electrification investment at this time on a purely economic basis. Therefore, it seems unlikely that any large-scale electrification will take place in the near future, without massive government participation."

Then why EMD's interest, why its investment in building prototypes, especially in view of the well-known EMD policy of making the diesel-electric a "moving target" through continuing developmental programs aimed at cutting maintenance costs, boosting reliability and producing an all-around better locomotive? Says Pete Hoglund: "We believe that some probability exists that the Federal government might decide to subsidize rail electrification, despite the economics, on the basis of national policy. From that standpoint, a demand for electric locomotives could develop—and EMD's position on this is to be ready to supply any need for locomotives with the most advanced and efficient product available."

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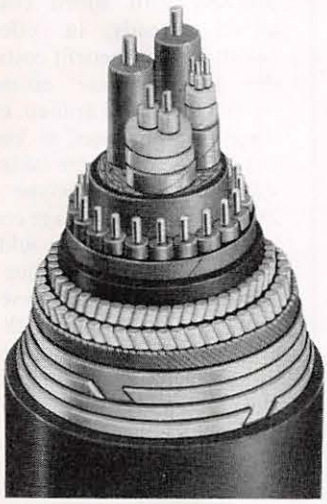

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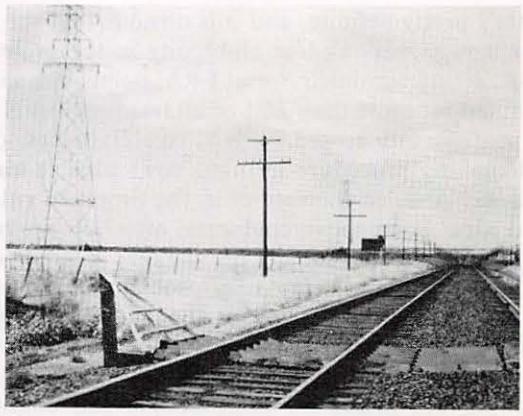

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Lines on Labor

GUS WELTY

RULES FOR THE HEADEND

The Railroad Operating Rules Advisory Committee is proposing a change in Rule 34 of the so-called standard code which is, to say the least, interesting. The committee, with members representing management, labor and state regulators, was set up by FRA and it has now made its recommendation to AAR that railroads adopt the revision. Anyhow, the new rule would read this way: "Employees located in the operating compartment of a locomotive must communicate to each other in an audible and clear manner the name or aspect of each signal affecting movement of their train or locomotive, as soon as the signal is clearly visible or audible. It is the responsibility of the engineer to have each employee comply with these requirements, including himself. It is the engineer's responsibility to have each employee located in the operating compartment maintain a constant lookout for signals and conditions along the track which affect the movement of the locomotive or train. If a crew member becomes aware that the engineer has become incapacitated or should the engineer fail to operate or control the locomotive or train in accordance with the signal indications or other conditions requiring speed to be reduced, other members of the crew must communicate with the crew member controlling the movement at once, and if he fails to properly control the speed of the train or engine, other members of the crew must take action necessary to ensure the safety of the train or engine, including the operating of the emergency valve."

WANT A "SAFE" RAILROAD? MAKE GOOD PEOPLE BETTER

That's pretty definite, and it is obvious that the committee as a whole saw a vagueness and/or ambiguity in the present rule. As Asaph H. Hall, acting administrator at FRA, points out, human-factor errors accounted for more than 24% of all train accidents in 1973 and that is an "unsatisfactory record." FRA, Ace Hall says, doesn't have a formal rulemaking procedure in mind now; what it wants is voluntary compliance. And, on the face of it, the proposed rule doesn't sound like a bad idea. Locomotive engineers, after all, are not immune to the afflictions that occasionally hit workers in other occupations—old age, physical problems, emotional problems, even (sure, it can happen) a hangover or worse, drugs or too many cold pills, to say nothing of drowsiness or simple absentmindedness. (As one who occasionally rides behind engineers, pilots, bus drivers, cab drivers, this reporter has nothing but praise for these people and confidence in them—well, maybe not always cab drivers, but the rest, sure: They do one hell of a job, and you probably don't mind all that much—considering their responsibility—that they're pretty well paid and that maybe they don't all put in a 40-hour week.) But, you do have to wonder about the possibilities under the proposed rule (as well as under existing rules). What if you have an eager but young and inexperienced brakeman or fireman and a veteran engineer, and what if the youngster decides that the veteran didn't respond right, didn't react in split-second fashion? What does the kid do? Go for "emergency" and flatten a few wheels? Get in a fight with the engineer? Subject himself to discipline if he made the wrong move either way? A thing like this is a judgment call, and it always will be. And sure, rules were made to be improved, and sure, some say you can't "teach" judgment. But the most important things to keep in mind are that rules are just words on paper and that "teaching" is too often too sketchy.

The real keys to operating safety lie in getting good people and training them better.

Two-step rate hike proposal is filed

One day after a 7% freight-rate increase (with certain major exceptions) took effect, railroads were back at the ICC with proposals for additional increases in two steps—though again, the industry's front was less than a united one. Both proposals were tied to increases in labor-related costs. On the 5%, estimates were that revenues might go up by almost $760 million, a figure coinciding almost precisely with added costs from wage boosts already in effect and new health/welfare-benefit costs. On the 2.5%, the added-revenue estimate was approximately $395 million, enough to cover labor-cost increases to become effective Oct. 1. Railroads were asking that the first-stage rate hike become effective May 28, with the second stage coming in Oct. 1.

As usual, questions could be raised concerning both the revenue and the cost estimates—mainly because not all roads chose to go along with the increase proposals and because contract holdouts by several unions (principally the Clerks and certain of the shopcrafts) tend to muddy the waters on the cost side. Generally, eastern and western lines were united on the 5%/2.5% plan. But there were holdouts in the South on the first-stage increase, and as before Chessie System opted out on the whole package; Florida East Coast and Long Island also decided to join Chessie on the outside.

In the meantime, Chessie had a court victory over the ICC to savor—though an ICC appeal to higher courts seemed most probable. This was the case that grew out of the Commission's order in Ex Parte 305 which required that railroads spend a specified part of an authorized rate increase on deferred maintenance and delayed capital projects. Chessie, in effect, said "You can't do that," and a three-judge Federal court in Virginia agreed. In the court's view the condition should not be imposed on Chessie because the Commission "lacks statutory authority to order a railroad how to spend its money."

Since the case involved only Chessie (Chesapeake & Ohio, Baltimore & Ohio and Western Maryland), the decision can affect only Chessie. But extension of the ruling would likely come as a matter of course to cover other roads, if the precedent established by the Virginia court stands or is upheld on appeal.

In addition, thought was being given to possible effects of the decision on the recently-reopened Ex Parte 241, in which the Commission told the railroads to show cause why they should not acquire 100,000 new freight cars and repair thousands more.

In arguing the Virginia case, Chessie called the ICC order an infringement on managerial prerogatives.

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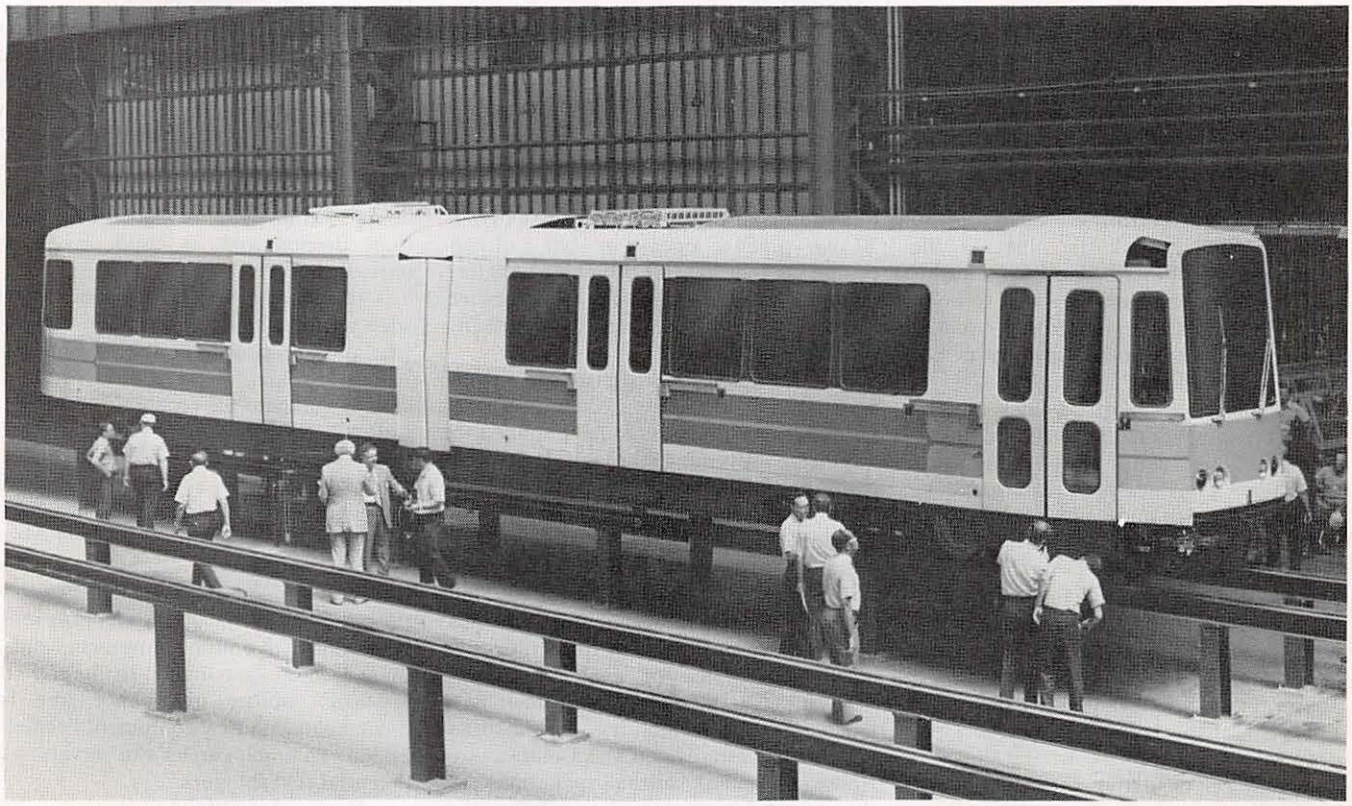

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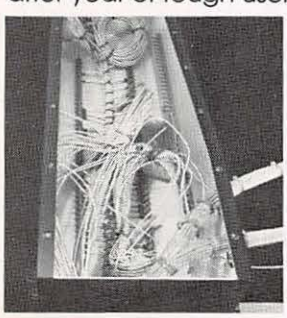

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BN calls it "bad news" for the true common carriers

Coal by pipeline: A challenge to the

By GUS WELTY
Senior Editor

If the promoters have their way, huge tonnages of low-sulphur western coal will be moving from mine to electric utility not by rail unit train but by coal slurry pipeline. The farthest-advanced pipeline proposal involves a line from northeast Wyoming to a point near Little Rock. But a line from northwest Colorado to Houston and two shorter lines in the Southwest are described as "planned," and two other long lines are said to be in early planning stages, one from Wyoming to Oregon and the other from near Edmonton all the way to Lake Ontario.

Will any or all of these lines ever be built? At this point, the issue remains in doubt for a number of reasons, one being that slurry pipelines require tremendous volumes of water and water is something precious in arid and semi-arid western states. On the Wyoming-to-Arkansas line, promoters are proposing to use not surface water but water from the so-called Madison formation which underlies parts of Wyoming and several other states; authority has been granted the promoter, Energy Transportation Systems, Inc., to draw off a fixed volume of water, but this issue may well wind up in the courts before it's finally decided.

● **To condemn or not to condemn?** Actually, the main current battleground is the statehouse—with the right of eminent domain the principal issue. Apparently, coal pipelines have the right in Wyoming, Colorado and Arkansas, but in other western states the promoters seem to be having only limited success in getting legislators to open up the laws. Kansas, for example, referred the matter to a study committee for a report in 1976. Nebraska has taken no action, and the feeling is that there will be none. The Oklahoma Senate did pass a much-amended eminent-domain bill, but observers see little chance of the measure's clearing the House this time around. Texas which would be affected by the Colorado-to-Houston proposal, is in the hearing stage, with the most recent hearings held April 30. (In addition, there are at least four bills alive in Congress dealing with this issue, with hearings continuing through May.)

As in any such confrontation, opponents of the "new" operate at somewhat of a disadvantage. Proponents can glamorize their "new" technology and talk glowingly of the economic advantages they can provide; opponents, on the other hand, often come off as blockers of "progress."

In the coal pipeline controversy, however, opponents have still another problem—the problem of shadowy statistics. For instance, on the Wyoming-to-Arkansas proposal figures have been bandied about indicating that the Arkansas electric utility may save about $14 billion in coal transportation costs over a 30-year pipeline operation; but railroad people say they haven't been able to determine the bases on which the estimates are being made, or the rate comparisons which are being used.

In addition, there is also some confusion about the proposed route itself. Originally, the line was to have snaked its way from Wyoming through Nebraska, Kansas and Oklahoma into Arkansas; but there have been reports, which railroad people again haven't been able to pin down positively, that the route has been shifted west to run through Colorado and bypass Nebraska and Kansas; but this doesn't seem to fit in with the acquisition of a 20% piece of ETSI by Kansas/Nebraska interests. (ETSI itself is a joint venture of Bechtel, Inc., and Lehman Bros., Inc.) Finally, on the Colorado-to-Houston proposal, railroad spokesmen say they are also uncertain as to whether the promoters plan a complete-route pipeline or a combination rail/pipeline haul.

● **The case against.** In any event, those opposing the pipelines have been able to muster arguments on a wide variety of issues, ranging from constitutionality of use of eminent domain to strictly practical operational considerations to the impact of slurry lines on national transportation capability.

Some of the most interesting observations have come on the operational issues, and they have come from Burlington Northern, a road especially well-qualified to make such observations: BN, Bechtel and a major mining company have worked together on extensive feasibility studies of coal pipeline construction and operation. BN joined in those studies for two reasons—to appraise the effect on rail coal movement which might be expected from use of new slurry-line technology, and to decide whether BN ought to use its own rights-of-way for slurry lines—and these were among the conclusions reached:

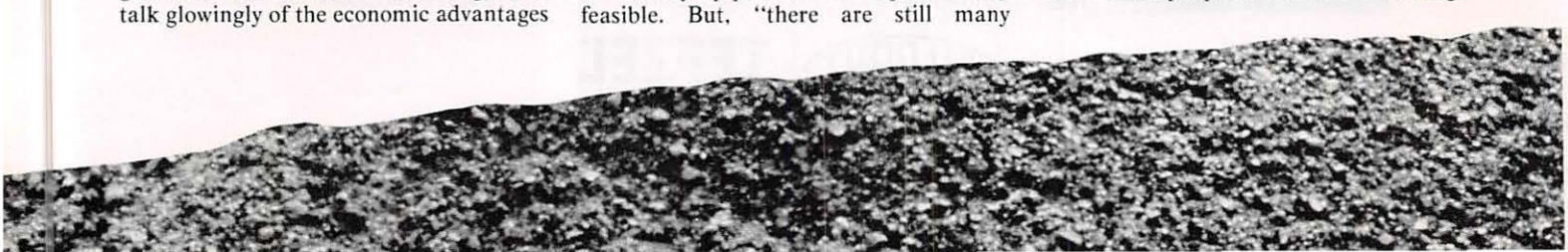
—Slurry pipelines are operationally feasible. But, "there are still many unknowns in dealing with such matters as the dewatering of large volumes of coal, the long-term abrasive effect of coal on the pipeline itself, the best disposition of polluted water which is used as a carrying vehicle, appropriate means of handling emergency stoppages in the line and so forth." Actually, BN found no reason why these and similar problems could not be resolved, "although we think the cost of doing so is likely to be a good deal higher than Bechtel and its child, ETSI, apparently believe."

—Except for very-large-capacity lines such as the 38-inch, 25-million-tons-per-year pipe proposed for the Wyoming-to-Arkansas route, "these facilities ordinarily cannot compete on economic terms with rail delivery provided by modern unit-train operations. Even a facility of the kind planned by ETSI must provide a very long haul and must quickly be brought to near-capacity operations." Huge slurry lines do, however, "represent a major threat to rail operations since they have the potential for the diversion of the more-profitable high-volume movements and on that account are likely to impair the railroads' ability to finance line improvements and new equipment needed to provide common-carrier rail service to all potential coal shippers."

—Since low-sulphur western coal "originates in arid regions, there are important and difficult public-policy questions regarding the availability and use of scarce water as a transportation vehicle."

—Important local considerations have to be taken into account at points along the line. Among these are the injection of recharge water; the possibility that there will be a line shutdown, which would require that the contents of the line be dumped at the pumping stations; the effect on land surfaces of construction techniques which involve displacement of a lot of earth; the large local requirements for electric power by which to operate the pumping stations; and the high pipeline pressures which would be involved.

● **Common carriage?** BN also has to-the-point conclusions on what slurry lines really are and on their competitive impact. In an Oklahoma presentation, BN's spokesman noted that "While a debate has developed as to the precise legal status of the pipelines under Federal law, there is no debate whatever about the fact that ETSI's real purpose is to serve but a single



unit train?

large cluster of electric generating plants proposed to be constructed by Middle South Utilities in Arkansas. . . .Should ETSI nevertheless serve another two or three electric utilities somewhere in Arkansas or Oklahoma, the fact remains that for all practical purposes the pipeline will remain a private carrier in the sense that it will provide a specialized single-commodity transportation service for a very few large customers in a limited service area; certainly it will in no way be comparable to the deliver-anywhere-for-anybody service which the railroads provide. Thus, when it is asserted that the pipelines will supply needed competition for the railroads, sight is lost of the fact that what ETSI proposes to do is to profit by exploiting a single, special market, leaving it to the railroads to satisfy the much-less-profitable, diffused needs of other scattered electric utilities. This is an old technique disguised in a new technology. In the transportation business, it is known as 'cream skimming.' It is fine for the lucky, specialized carrier and its few customers, but it is bad news for the true common carriers and the general public which depends on them for service."

● **"Major policy problems."** As BN sees it, a pipeline eminent-domain proposal "involves not merely technical problems of eminent domain. It raises major transportation policy problems." And the immediate question before a governmental body studying the issue "is whether it should recommend the adoption of a public policy which may sacrifice the ability of many utilities in many parts of the country to obtain low-sulphur western coal at low rail rates simply because one company thinks it can exploit a special coal-marketing situation. The propriety of granting a preference for a few. . .at the expense of many is the ultimate issue."

These points were reinforced in another legislative forum in another state by a Santa Fe representative, who declared that "the power of eminent domain should not be granted to a private company unfettered by the normal restraints which apply to common carriers such as railroads, at least until proper resolution of the many national issues regarding necessary regulation and showings of public convenience and necessity on the part of coal slurry pipelines has been carried out. To whatever extent the railroad industry loses the opportunity to earn revenue from transportation of coal because it is moving in pipelines, such revenue cannot be made available to railroads to make needed new investments or to pay continuing capital costs of the investments already made or to be made in the facilities required to transport a host of other commodities. One aspect of any policy encouraging the movement of coal in pipelines is the clear potential for adverse effects on rail freight rates paid for other commodities shipped. . . .As a minimum, we suggest that such a momentous question cannot be resolved on a state-by-state basis, and certainly not by simply according eminent-domain power."

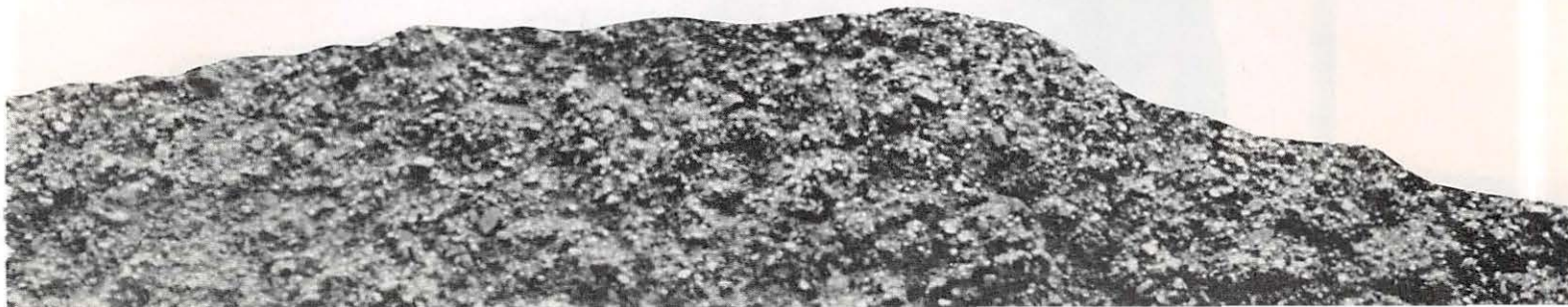
(Generally, there seems to be agreement among rail opponents that serious national public-policy questions exist and that inevitably this means some resolution at the Federal level. At the same time, some westerners also fear that they may win the battle at the state level only to lose it in Washington.

● **No "stifling."** In the continuing debate, railroads may find themselves accused of trying to sit on new technology, but Santa Fe's spokesman meets that charge this way: "I do not mean to suggest that inefficient or even less-efficient modes of transportation deserve to be preserved or perpetuated for the benefit of their owners, thus stifling the development of new technologies. Nor do I mean to suggest that slurry lines in fact can be proved more efficient than unit coal trains. However, it must be agreed that current events have demonstrated that the United States needs its railroads, and one real issue which should be considered in determining whether eminent-domain authority should be extended for the construction of coal slurry pipelines is whether construction of the pipeline is necessary and whether its construction would help to preserve the balanced transportation system which this country desperately needs for the future. Railroads must make such showings and it would be unfair if coal slurry pipelines did not."

In Nebraska, the state railroad association took a similar tack on the Federal/state issue: "At the present time, no Federal recognition or certification of any public need for coal slurry pipeline transportation exists. In the last session of the Congress, bills were introduced to bring interstate coal pipelines under at least some form of Federal regulation. Some Federal bills considered would have conferred a Federal right of condemnation upon common carriers of coal by pipeline who had been granted a certificate of public convenience and necessity to undertake their operations. However, Congress did not pass any such bill, and as of this time there has been no Federal action undertaking to regulate coal pipelines or affirming some public need for interstate transportation of coal by this new mode. At least until such time as the Federal government has determined what the real need for coal slurry pipelines may be, and the regulatory framework in which they should be permitted to operate, it appears highly inappropriate for individual states to anticipate what the Federal actions will be, or to confer state powers of eminent domain to further some claimed benefits to interstate or Federal public purposes. This is especially true when the Federal government has not itself recognized any such public purposes for coal pipelines."

There is, of course, one coal slurry pipeline now in operation in the United States, the relatively-short Black Mesa line which stretches from a mine in northern Arizona to a power plant just across the state line in Nevada. Once, however, as oldtimers may recall, there was another line, also a relatively small operation, running a bit more than 100 miles from southern Ohio to the Cleveland area. This was not the giant line such as ETSI envisions; it cost "only" about $13.5 million to build and the contract involved just 18 million tons of coal over 15 years; but there were to be annual savings in coal-transportation cost of $1 a ton, then estimated to be significant. That Ohio line went into full operation in 1958. Less than five years later, its operators announced it would be closed (RA, Sept. 1, 1958, p. 32; May 13, 1963, p. 7). Why put the line in mothballs? Principally because the railroads countered with changes in the way they moved coal and with rate adjustments to the point where the economics, once assumed to favor the pipeline, switched back to favor rail.

It is, of course, a different ballgame today. The threat—at least in potential—appears far greater, and not just to railroads but to the nation's over-all transportation capability. Railroads owe it to their own interest to get the facts on slurry-line proposals out in the open—but they are also performing a public service by doing so. ■



MOVING PEOPLE

A slow order for BART

By WILLIAM D. MIDDLETON
Contributing Editor

For the Bay Area Rapid Transit District the past six months haven't proved to be the best of times, but then no one expected they would be. Even last September, when BART opened the Transbay Tube and made a successful transition to a limited level of revenue service over its full 71-mile system, BART recognized that its multitude of technical problems were far from over, and that it faced what could well be some of its most difficult months. But there was confidence that sufficient headway could be made in resolving those problems to permit substantial progress toward the system's designed full-service level by some time this spring (RA, Oct. 14, 1974, p. 20). That goal now proves to have been an excessively optimistic one, and BART has now had to postpone indefinitely its plans for any expansion of service levels.

Some new problems and setbacks, as well as tough and persistent old problems, have contributed to BART's new "go slow" approach to service expansion.

● **Legal problems, too.** In October the BART board of directors voted to file suits totaling more than $237 million against the system's engineering consultants, Parsons, Brinckerhoff-Tudor-Bechtel, and suppliers Westinghouse Electric, Rohr Industries, and Bulova Watch Co., claiming inadequate engineering and contract management by the engineers and failure to meet equipment specifications by the suppliers. At about the same time Westinghouse presented a $15.8-million claim of its own for extra installation costs for BART's train control system. While neither of these actions directly affects BART's ongoing effort to resolve its technical problems, the diversion of technical staff required to pursue the suits, as well as the further deterioration of relations between BART and its engineers and suppliers that must almost inevitably accompany the litigation, can hardly be expected to enhance the problem-solving effort. Indeed, indicative of the deteriorating relationship was the BART board's decision in February to reject a Westinghouse bid (the only one received) for the manufacture of automatic train control equipment for the system's final 26 A (control) cars, scheduled for delivery from Rohr this fall. The decision will render the 26 cars inoperative for more than a year while BART redesigns the ATO equipment, and then seeks new bids from alternate suppliers.

During January the system was plagued by a series of accidents and mishaps. On January 10 an improperly thrown switch caused a sideswipe collision in BART's Concord Yard that resulted in damages of close to $100,000. On January 19 a collision between a test train and an on-rail maintenance vehicle near Oakland caused an estimated $700,000 in damages and took the life of the maintenance vehicle operator. Scarcely a week later an A car from a train being repaired in a siding at MacArthur Station in Oakland rolled free onto the running tracks through three stations before coming to rest on the Oakland Y. The incidents led to renewed questions about BART operating safety and a new series of hearings by the California PUC.

Most important of all from the viewpoint of future BART service expansion has been the system's severe, continuing problems of car reliability and availability. Car failures continued at a high rate in the months following the transbay opening. In October, when BART experienced one of its highest equipment failure rates, more than 1,300 car failures were reported; almost 400 of them required removal of trains from service. Compounding the problems caused by high failure rates has been a severe spare parts shortage. Earlier this year, for example, BART had as many as 113 cars out of service awaiting replacement parts.

As a consequence of these problems, BART's equipment availability rates, far from beginning a hoped-for advance to more acceptable levels, declined to even lower levels in the months following the transbay opening. In September, when the Transbay Tube opened, availability had been running between 50% and 60% for the system's A cars, and slightly above 60% for B cars. By February, availability had fallen to scarcely 40% for A cars and 50% for B cars, and not until late March had the rate climbed back to where it was in September.

Primarily because of the constraints imposed by limited equipment availability, as well as the need for continuation of BART's limited service levels and operating hours, ridership has fallen below original projections by as much as 25%. Daily passengers averaged a little over 118,000 in January, for example, against a projected level of nearly 160,000 daily trips.

● **Some successes.** For all the setbacks, there have been some noteworthy successes as well.

Perhaps the most serious of the system's initial start-up problems were the difficulties which have precluded unrestricted use of BART's automatic train control system ever since the first line opened in 1972. Now, a final resolution of those problems is virtually complete. Although BART is still running under the interim CABS I (one station separation) central computer back-up system to BART's basic ATC installation, the Sequential Occupancy Release (SOR) system that will provide a permanent ATC back-up is now almost ready for operation.

Installation of the SOR system's wayside computers was completed before the end of 1974, most testing work has been completed, and portions of the system are already being operated on a monitoring basis only. Still needed is California PUC approval to begin SOR operation. Whenever it does go into ser-

vice, SOR will permit BART to operate for the first time at the full design level of its basic ATC system, a necessary prerequisite to the inauguration of through Richmond-Daly City service and service at minimum headways.

Substantial progress has been made toward completion of a number of design changes decided on after BART safety became an issue in 1972. A series of modifications to wayside ATC equipment is almost complete. Equipment changes designed to give train operators a greater ability to intervene in the event of equipment failure, which include the provision of an operator's emergency maximum rate braking control, an operator-controlled "impeded mode" speed control, and an automatic operator alertness check, should be complete within the next few months.

During the Thanksgiving to Christmas holiday shopping season, BART successfully extended its service hours by two hours on weekday evenings. Average daily passenger traffic reached a level of 126,540 in December, BART's best traffic month since the system opened.

Early in December BART installed a trial express bus service on five routes operating between outlying areas of Contra Costa and Alameda countries and several BART stations, with encouraging results.

On March 10, BART and the San Francisco Municipal Railway finally inaugurated a long-planned transfer system which provides BART riders with a two-part ticket, good for Muni rides to and from a BART station, for only a single fare. Money from the 1974 Federal transit assistance act is funding most of the program's estimated $2.3-million annual cost.

● **A major transport force.** But most important of all; even if the system has not yet attained its ultimate service level, BART has become a major force in Bay Area transportation since the transbay opening. BART's trains are generating a weekday passenger travel volume of more than 1.6 million passenger-miles daily. Since the system's first line opened in September 1972, BART has carried more than 42 million passengers without a serious injury or fatality to a single one of them. And, moreover, those passengers have enjoyed a transit service quality that, as yet, is unequalled anywhere in the world.

In charting its new, and more cautious, approach to bringing its service level up to the system's original design objectives, BART has not suffered from any shortage of advice and guidance.

LIMITED EQUIPMENT AVAILABILITY has held BART ridership 25% below projections. Still, BART trains are producing 1.6 million passenger miles of service a day and, says the author, giving Bay Area riders "a transit service quality unequalled anywhere in the world."

In December 1974 the management consulting firm of Cresap, McCormick and Paget completed an extensive management audit of BART under contract to the California Senate's Committee on Public Utilities and Corporations, headed by Senator Alfred E. Alquist. The consultants detailed a number of recommendations concerning BART's budgeting and planning processes, organization and staffing, and measures to resolve the system's technical problems, both on a short- and a long-range basis.

Among the most important of the CM&P study's recommendations were those concerning the short-term measures the consultants felt were needed to gain better control over equipment maintenance. Until the equipment maintenance function was brought under control, they recommended, BART should defer any expansion of service. Preventive maintenance should be current, the backlog of cars awaiting unscheduled maintenance should be held to about two days work, and car availability should be not less than 85%.

BART's newly-elected board of directors, which took office in December, has agreed to this strategy, and has proved to be a strong force behind the system's new "go slow" approach to service expansion.

Equally important to BART's future course has been the outcome of the California PUC hearings that resulted from the series of January accidents and mishaps. Evolving from these hearings, which extended over several days in February and were concluded late in March, was an agreement by BART to undertake an intensive program for detailed identification of a number of the system's most critical technical problems, and the design and testing of corrective modifications, all within a 180-day period. BART is setting up separate engineering "task forces" to consider high priority equipment reliability problems in three primary subsystems: the central control computer, station and wayside train control equipment, and cars.

● **Selecting the problems.** BART selected the specific problems to be examined by the task forces on the basis of reported failures experience, modified by the application of a weighting factor taking into account the severity of each failure type or its impact on BART operations.

During the 180-day period BART will first endeavor to identify and confirm by field testing precise failure causes, then develop feasible engineering solutions to the problems, and finally outfit a test fleet for evaluation of the design improvements over a subsequent six-month test period. The California PUC will monitor the program.

Among the tasks to be taken up by the central control task force will be the development of diagnostic routines to reduce the mean time to restore the central computers in the event of failures, and algorithmic changes needed to reduce manual interventions by BART's central controllers. The group studying the station and wayside ATC equipment will look into such problems as loss of speed commands, false occupancies, and loss of automatic routing.

By far the largest part of the problems being studied under BART's new task force approach, however, are those associated with the cars themselves. The catalog of BART's continuing car malfunctions is a dismal one. Traction motor, reverser, and power/brake contactor flashovers; thyristor failures; and dead car condition are among the propulsion system problems that accounted for nearly half of a 1974 average of over 300 cars removed from service monthly. On-board train control problems include loss of speed codes, programmed stop failures, and train identification failures. Mechanical subsystem trouble areas include air conditioning system failures and faults in friction brake annunciations, while auxiliary system difficulties include failures of door control system, motor-alternator sets, and annunciation systems.

BART's vehicle reliability task force, headed by Tony Venturado, will be subdivided into four groups to consider separately these propulsion, train control, auxiliary, and mechanical subsystem problems. *(Continued on page 20)*

Technical resources for the task force approach will come from both an expanded BART staff, and outside consultants. Lawrence Berkeley Laboratory, already consultants to BART, will play an expanded role, while BART is also planning to contract with additional industry consultants. Among those under consideration are General Railway Signal and Westinghouse Air Brake. Krishna Hari, BART's manager of equipment engineering, will be in over-all charge of the reliability task force effort.

While engineering efforts go forward to find long-term solutions to some of BART's fundamental equipment problems, BART's Maintenance Department is also devoting a sizable effort to the task of gaining short-range improvement in equipment reliability through a more effective maintenance program.

- **Preventive maintenance.** The large volume of unscheduled repair work resulting from the high component failure rates being experienced with the BART cars has in turn affected the maintenance shops' ability to fulfill their scheduled preventive maintenance program. The Cresap, McCormick and Paget management audit, which called rolling stock maintenance BART's "major operational problem," noted that during most of 1974 BART shop forces had been able to complete only about half the required preventive maintenance because of the unscheduled repair effort required to provide a sufficient number of serviceable cars for scheduled operations.

Also contributing to PM program interruption has been a large volume of shop work for required modifications to the operating car fleet, involving as many as 17 to 18 cars at a time.

"Eventually," commented the management consultants, "breakdowns attributable to the lack of PM will begin to occur, unscheduled repair work required will increase, and over-all car availability will decline."

The CM&P management audit made a number of recommendations for changes in the BART maintenance organization and procedures, in addition to those already developed by BART's director of maintenance, Ray Carroll. Perhaps the most important, from the viewpoint of short-term improvement in BART rolling stock reliability, was the recommendation—made by both CM&P and BART's own Quality Control Department—that BART temporarily reduce the size of its operating vehicle fleet as a means of bringing the maintenance program under better control. Under this proposal, which BART is preparing to carry out, cars with a record of high failure rates, and those with high priority modification requirements, will be taken

(Continued on page 42)

For "transit's toughest job": Frank C. Herringer

On April 25 the BART board of directors announced what will doubtless be its most important decision since taking office last December and for some time to come; UMTA Administrator Frank C. Herringer is coming west to become BART general manager, effective July 1.

According to Elmer B. Cooper, vice president of the BART board and chairman of its general manager selection committee, Herringer was "the best person we looked at."

Certainly Frank Herringer, who has held the UMTA post since February 1973, brings a sizable reputation and record of accomplishment to what may well be the toughest job in transit. He is generally considered to be the chief architect of the landmark $11.8-billion 1974 Federal transit act. Before taking the UMTA post Herringer served for 15 months on the White House staff. Prior to joining the administration in 1971 he was associated with the management consulting firm of Cresap, McCormick and Paget. He is a business administration graduate from Dartmouth.

Herringer's selection, at a salary of $68,500, came after the BART board decided to broaden its search to include likely candidates outside the transit industry. Reportedly, several leading transit men had previously turned down the tough BART job. His selection was widely hailed in the industry; it "could well be a stroke of genius," said Bill Stokes, former BART general manager and now American Public Transit Association executive director.

Herringer's selection was an action that has long been overdue. BART has been without a permanent general manager ever since last July when Bill Stokes moved east to Washington; the top BART job has been held down on an acting basis since then by former Assistant General Manager-Operations Lawrence D. Dahms, whose old post has remained vacant.

It is to Larry Dahms great credit that BART has made the substantial progress it has during that period. In July the system successfully made the transition to the computer-based CABS I back-up to its automatic train control, and only two months later opened its Transbay Tube and started revenue service over the full 71-mile system. Today BART is hauling close to 120,000 passengers daily, nearly double the number it was carrying last July.

But the lack of a top operating assistant, and the uncertainty within the organization so long as the top position was filled only on an "acting" basis, have obviously handicapped BART, particularly where long-range decisions are concerned. Recognizing this, management consultants Cresap, McCormick and Paget in their December 1974 report called the selection of a permanent general manager BART's most critical organizational need, and recommended it be given "the highest immediate priority."

The youthful (32) Herringer will bring the substantial stature he has acquired in Washington to BART's top job at a particularly advantageous time. For as the system settles down to the long, hard job of resolving its remaining technical problems and bringing service up to design level, BART is going to have to ask for yet more patience and understanding from a Bay Area public that has paid much and waited long for modern transit. That patience and understanding are going to come much more readily with a new set of faces at the top. And with a newly-elected board, a prestigious new general manager, and an as-yet-unselected assistant general manager-operations, that is just what BART is going to have.

BART's new general manager

Less than a year ago, in a Railway Age interview, Herringer said of BART, ". . . when this system runs, and runs right, it's going to be far and away the best rapid transit system in the world." Now, in accepting the enormous challenge of BART's top management position, Frank Herringer is taking on the job of making that statement so.

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What's ahead for Amtrak?

At 5 p.m. on April 23 Paul H. Reistrup boarded Amtrak Train No. 132, a Metroliner, at Washington's Union Station, and rode as far as Baltimore. An attendant complained that the food for coach passengers was frozen too hard for quick reheating. Could something be done about it? At Baltimore, Reistrup switched to No. 60, the Montrealer, and subsequently observed, "Coach 6027 at the vestibule end had one of the strangest end-door handle arrangements I have ever seen. It looked like a piece of steel rod which had been bent into the shape of a hook, covered with a big mound of masking tape which served as a handle. I am sure we can do this better." Leaving the Montrealer at Wilmington, Del., Reistrup boarded Metroliner No. 24 for the ride to Philadelphia, and scribbled a note to himself: "A lot could be done to expedite unloading and loading. The handling of the passengers at the parlor car is just as archaic as it was in 1905." He rode back to Baltimore on Metroliner 127, and wrote down the complaint of a woman who said she was unable to get a meatless meal on Amtrak. Was this any way, she asked, to treat this country's one million vegetarians? At Baltimore, Reistrup transferred to No. 177, the Senator, for the last leg back to Washington—tired, but not too tired to jot down the observation that "Car 3900 sounded like it had a flat wheel at the vestibule end."

Paul Reistrup has not spent every waking hour, since he became president of Amtrak two and one-half months ago, riding Amtrak trains—though it probably seems that way to subordinates who have been showered with his "debriefing" memos. Reistrup did travel on 31 of Amtrak's 225 trains during his first 60 days in office. But he also found time to place orders worth $253 million for 435 new Amtrak cars (bringing Amtrak's backlog of equipment on order to around $500 million); draw up a plan for a major corporate reorganization; hire a new ad agency ("The same one," he notes with pleasure, "that sells McDonald's hamburgers"); and, far from least important, go up to Capitol Hill and make a persuasive plea for Federal grants totaling more than $1 billion to carry Amtrak through the next two years.

Reistrup is well aware that the job of running the nation's 17th largest Class I railroad (a position Amtrak earned by grossing $256.9 million last year) calls for diplomatic and political as well as operating skills—because Amtrak is, after all, the creature of Congress. But he feels strongly that his first responsibility is not to the politicians but to Amtrak customers. He is determined to give them a good ride for their money—a far better ride than they have been getting. So he has made it a first order of business to get out on the trains, meet the passengers, talk with the crews, meticulously inspect the equipment, and write candid reports letting those responsible know what he likes—and doesn't like—about the way Amtrak passengers are being treated.

• Reistrup's priorities. Amtrak was four years old on May 1. Reistrup, a West Pointer who came to Washington via the Baltimore & Ohio and the Illinois Central Gulf, where until recently he was senior vice president-operations, had been on the job just two months that day. But he already had a good fix on what he wanted to do, and how he proposed to do it.

Meeting with reporters at a National Press Club breakfast, Reistrup outlined three main priorities he had set for himself:

(1) Improving and speeding up Amtrak's response to the needs of its passengers. To accomplish this, Reistrup has in mind a major corporate restructuring. Up until now, authority has been highly centralized in Washington; field personnel have had to go to Amtrak's headquarters offices at L'Enfant Plaza for a go-ahead on nearly all major decisions. What Reistrup wants is four strong regional operations—at Los Angeles, Chicago, New York and Miami—headed up by vice presidents who will have a considerable amount of autonomy for sales, service and operations. As one aide described it: "If 700 college students stranded by a snowstorm descend on us in Chicago, the Amtrak officer there, under the new setup, will be able to make a quick decision about putting on extra cars or trains; he won't have to wait for an okay from Washington."

(2) Improved car maintenance. As of mid-April, Amtrak had 1,963 cars in its active fleet—but only 1,380, or 70%, were available for service. The others were in shops or on sidings. A number of cars that *were* in service probably shouldn't have

been. The quickest way to correct this, Reistrup believes, is for Amtrak to take over from the railroads as much equipment maintenance as possible. Amtrak has already acquired the Beech Grove, Ind., shops from the Penn Central, and is now negotiating for takeover of maintenance facilities at Chicago, Los Angeles, Miami, and possibly New York.

New cars are, of course, on the way—762 of them. But many won't be delivered for two or three more years. Generally speaking, Reistrup is a patient man. "You really ought to begin walking at a fast speed before you run," he observed recently. But he is not patient where he sees a situation that can be corrected; he feels that the condition of Amtrak's present fleet of cars is something that can and must be corrected—quickly.

(3) Improved track is also high on Reistrup's priority list. This will be a far more difficult situation to correct. Under the law that brought Amtrak into being, the participating railroads are required to maintain track up to the standards that prevailed on May 1, 1971. This has not always been the case, especially where Penn Central, by far Amtrak's biggest operator, is concerned. Amtrak has told Congress that it needs a minimum of $200 million a year for at least five years for track improvements. That money has not, so far, materialized. A number of proposals are now before Congress for improving railroad track generally, for both freight and passenger operations. Reistrup hopes that one of these plans will be adopted—and soon. Recently, on his own, he floated the concept of a railroad track fund supported by taxes to be levied on all freight transportation modes.

● **Amtrak in 1980, and 1990.** In a recent interview with Railway Age, Reistrup talked about where he wants Amtrak to go under his administration—and some of the problems that may be encountered en route. Some excerpts from the taped exchange:

What kind of operation would Reistrup like to see by the year 1980?

Reistrup: "Cool cars in the summer, warm cars in the winter, consistency of service, the average age of cars brought down considerably, dedicated trainsets of new equipment running over most of the route structure, with perhaps the secondary trains using older equipment."

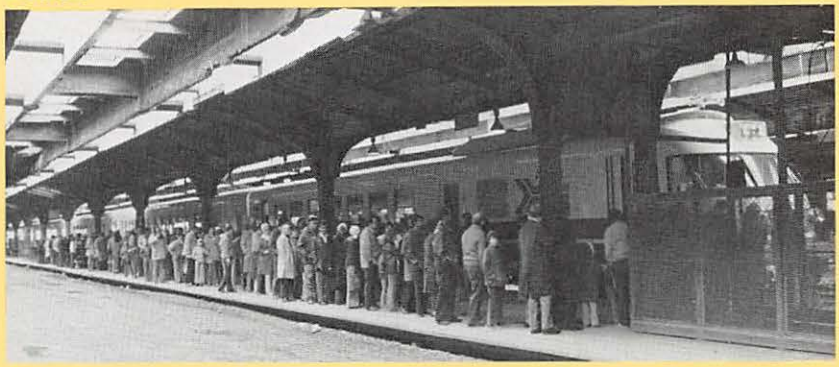
(Continued on page 28)

New President Paul Reistrup is determined to give the taxpayers a good run for their money. Here's what he has in mind.

"Come see our train," said Amtrak – and 30,000 people showed up

Before putting a new French-built Turbo into service between Detroit and Chicago, Amtrak invited its potential riders to look it over. Officials were flabbergasted—and pleased—when 30,000 visitors jammed display areas in four cities.

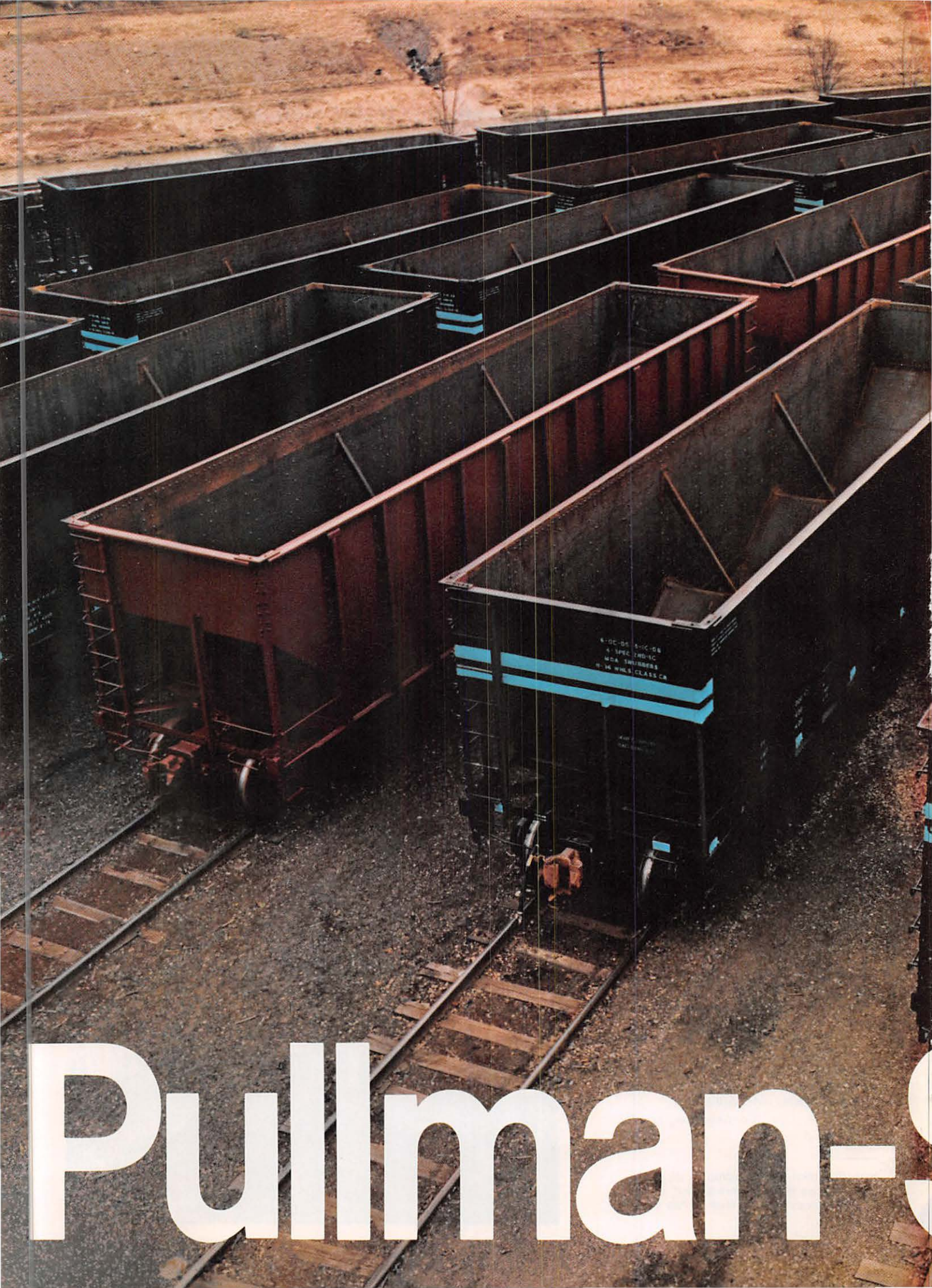
Detroit



Dearborn

Ann Arbor

Kalamazoo



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Standard

AMTRAK AT A GLANCE

SYSTEM RIDERSHIP

	2 mos. 1974	2 mos. 1975	Pct. change
First	40,352	31,624	(22)
Coach	1,442,570	1,164,747	(19)
Total	**1,482,922**	**1,196,371**	**(19)**

Note: Ridership decline in 1975 is attributed to extraordinarily heavy traffic during energy crisis of 1974.

OPERATING DEFICITS (actual and projected)

FY 1972 . . . . . $153.5 million
FY 1973 . . . . . $141.8 million
FY 1974 . . . . . $197.9 million
FY 1975 . . . . . $325.0 million
FY 1976 . . . . . $350.0 million
FY 1977 . . . . . $355.0 million

CAR AVAILABILITY

Type	Net active fleet	Unserviceable	Pct. available
Conventional	1844	552	70.1
RDC	23	11	52.2
Metroliner	61	17	72.1
Silverliner	8	0	100.0
Turbo cars	27	3	88.9
Total	**1963**	**583**	**70.4**

LOCOMOTIVE AVAILABILITY

Type	Net active fleet	Unserviceable	Pct. available
Diesel-electric	317	43	86.4%
Electric	51	10	80.4%
Total	**368**	**53**	**85.6%**

ON-TIME PERFORMANCE

Routes	No. Trains Operated Mar. '75	Pct. On-Time Mar. '75	Mar. '74
Metroliners	870	72.8	74.1
Turbotrains	114	61.4	66.1
Turboliners	100	67.0	79.8
Corridor	3,876	82.9	77.8
Long-Distance	1,518	69.0	55.8

Plans for new routes

Norfolk-Cincinnati (Started March 25)
Boston-Chicago (Planned for September)
Washington-Denver (Planning stage)
Minneapolis-Duluth, 403-b (Started April 16)
Chicago-Green Bay, 403-b (Under discussion)
Chicago-Madison, 403-b (Under discussion)
Chicago-Toronto, 403-b (Planning stage)
Los Angeles-San Diego (Planning stage)

New equipment

26 electric locomotives (GE) for delivery May-June 1975.
25 diesel-electrics (EMD) for delivery August 1975.
Four French Turboliners, delivered March 1975.
Seven Rohr Turboliners, for delivery March 1976.
494 Metroliner-type cars (Budd), delivery started April 1975, to be completed by June 1977.
235 bi-levels (Pullman-Standard), for delivery starting January 1977.

(Continued from page 25)

How about 1990?

Reistrup: "I would hope that by that time we will really have matured in the corridors and be serving where the market is. In this business, which is a government-subsidized rail passenger operation, the market is public need, giving full weight to the energy situation.

"What I would like to see is a substantial corridor operation with a reliable, skeletal long-distance service. I really am not, at this time, inclined to running 'cruise ships' around the country—although we may do that. Maybe we should handle these as specials, perhaps for someone else on a contract basis. Maybe that's the way to handle people who want to ride around the world in a stateroom.

"We will certainly continue to have long-distance trains, but the corridors are where the intense service will be—and I don't mean just in the Northeast. I rode the train from San Diego to Los Angeles, and that's really something. We had 133 on when I made my count. That's the 7 a.m. train and, I think, largely unadvertised.

"We are presently analyzing all of our services, train by train. We are studying not only economic factors but social factors."

How about state-supported 403-b services?

Reistrup: "I am a great believer in local initiative. Right now we are drawing up some parameters for working with the states on 403-b applications. We want to give them some firm guidelines. Too often, in the past, these decisions have been on an ad hoc basis each time a state came up with a proposal."

Reistrup has been sharply critical of certain ICC practices. How does he feel about the proposal that the ICC no longer establish service standards?

Reistrup: "People may misread me on this—but I really don't have too much quarrel with the ICC's service standards. I would probably subscribe to a similar set of standards, with the major difference that a good deal of flexibility would be built in. When you are running something, you have to be flexible. For example, I am all in favor of good food service; But I think food service at 3 o'clock in the morning is silly. It's terribly expensive. The attendants are on overtime. They have to pry their eyelids open with toothpicks. I have yet to see anybody eating at 3 o'clock in the morning, and I have been in there checking. And there is the arbitrary reservation for a trip of 200 miles. Why not 210 miles? Or 190?

"Certainly we ought to have service guidelines; but it ought to be a rational effort. Right now the people who ought to be running the operation are having to ad-

(Continued on page 32)

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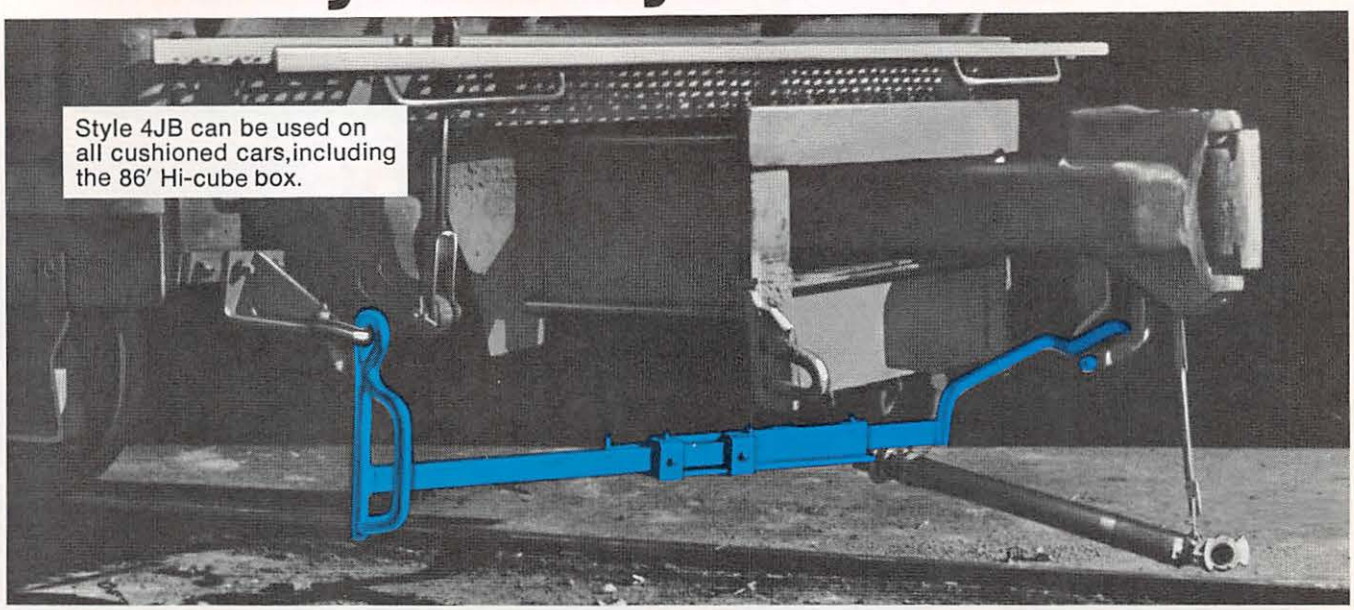
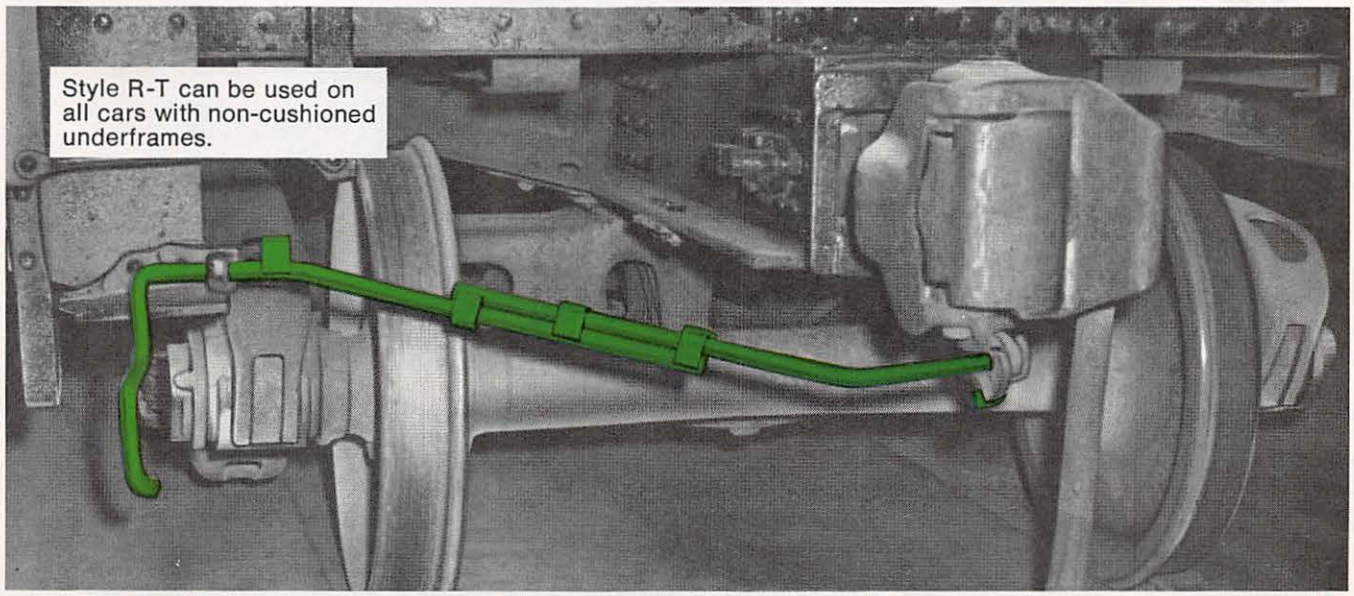


Stanray replacement uncoupling levers free you from unnecessary labor costs.



When it comes to replacing uncoupling levers, Stanray offers you the fastest, most economical system.

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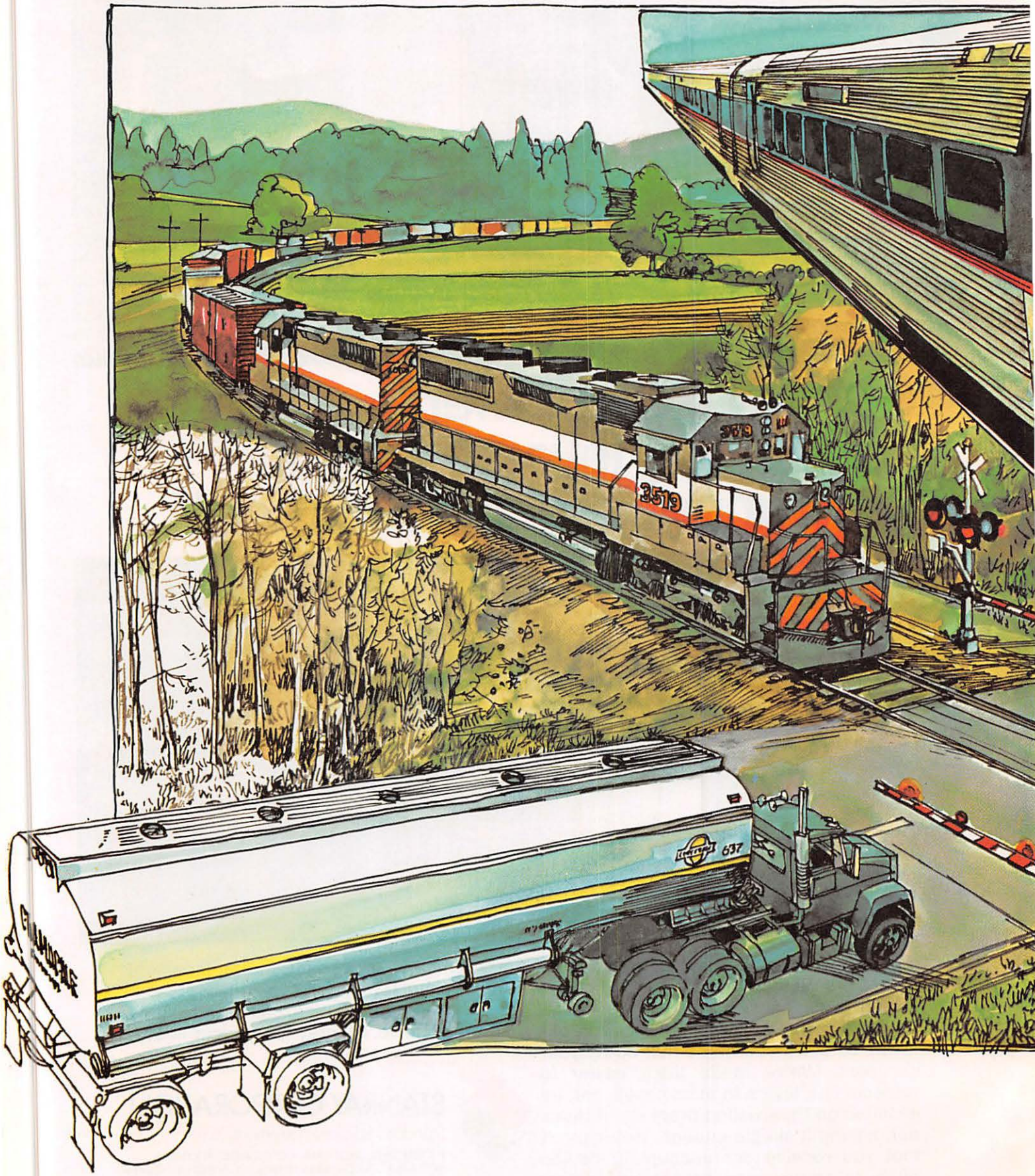
WABCO Control: First we keep autos



out of trains. Then people out of autos.

Before red lights flash and striped arms drop, sophisticated, extremely reliable monitoring, sensing and signaling equipment operates within tight time tolerances. WABCO has designed and manufactured total systems for every type of crossing protection.

The pressure is building for more crossing protection along your lines. We'd like to put our experience to work for you. It will take some of the pressure off.

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WABCO control systems also induce people to park and ride. We design and build the highly automated control systems which contribute to on-time, safe arrivals. Our control systems enable an entire transit line to be operated from one control center. We regulate starting and stopping, speed, and even provide voice communications between train attendants and control centers.

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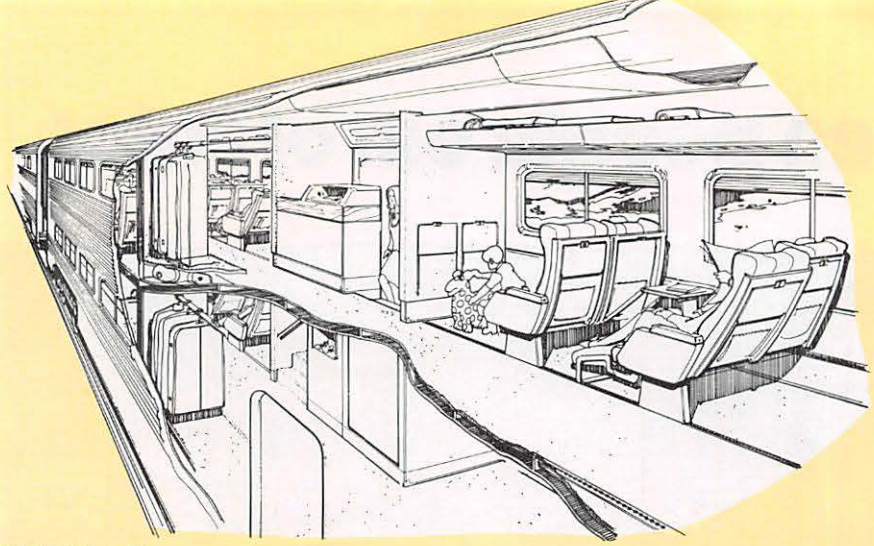
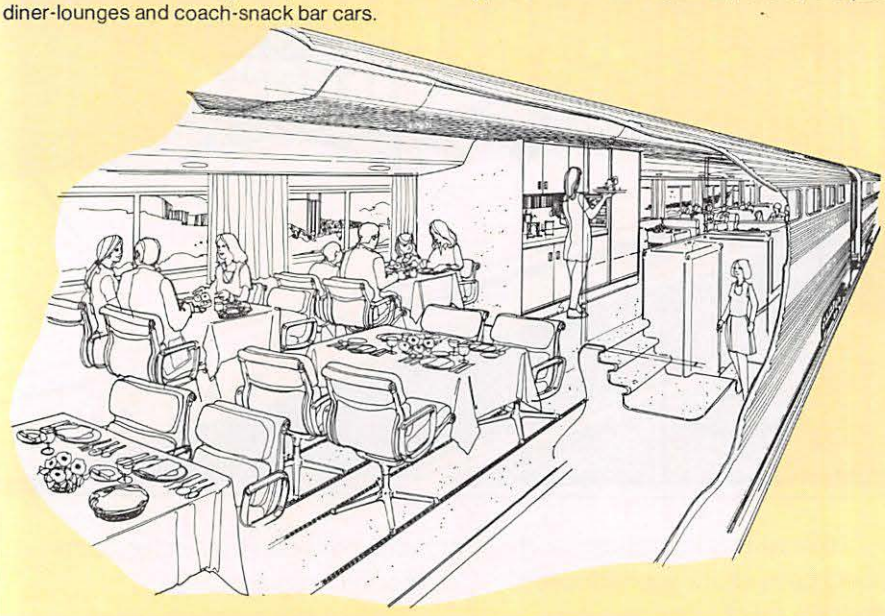


SOMETHING NEW IN TRAIN TRAVEL
In announcing Amtrak's recent order for 200 bi-level cars from Pullman-Standard, Amtrak President Reistrup said that what Amtrak had in mind was "a **new** train unmatched anywhere else in the world" made up of equipment that "will drastically change the look and style of American train travel." Artist's sketches show (above) upper and lower coach sections of new cars; and (below) a food-service car. Altogether, there will be five types of bi-levels—coaches, diners, sleepers, diner-lounges and coach-snack bar cars.



(Continued from page 28)
dress their attention to the people who are *trying* to run it from the outside, rather than running it properly.

"We've got lots of help, including that of 250 million Americans. And we listen to them. But I think that management after weighing all sides, has to make the judgment."

Is he worried that the political pressures from Congress, which in the past has had its own ideas as to where trains should be operated, might become unbearable?

Reistrup: "No. I am respectful of my elders and my superiors—I graduated from West Point—but I am not going to be shoved around. They've got the wrong guy if that's what they have in mind. We will run anything that the law requires us to run—but everyone is going to know what it costs.

"Unfortunately, there are some operations right now that are sapping our good equipment. I recently rode a train out of New York that had 200 people standing. And I rode a train out West that had only 15 people on, including myself. Again, I say—we have to put the trains where the markets are."

(There is considerable sentiment in Congress for giving Amtrak's managers more freedom-to-manage. As passed by the House on April 24, the Amtrak Improvement Act of 1975—in addition to authorizing direct Federal grants totaling $1.118 billion between now and Oct. 1, 1977, to cover Amtrak's operating and capital requirements—also contains provisions designed to turn over to Amtrak the final say on which routes are to be kept, which are to be dropped, and which are to be added.

(As Congressman Joe Skubitz of Kansas described it during the floor debate: "Up to now there has been far too much attention to where the trains might run rather than whether they were justified or should be continued. Everybody was in the act, and the corporation had little to say about what it felt should be operated and when. . .What we have done in this bill is to try to minimize outside influence and increase corporation responsibilities. To accomplish this, the bill sets out a fairly elaborate system for creating criteria for the approval of new routes or the discontinuance of old routes. The bill provided that Amtrak shall initially work out the criteria under which the new route shall be established or an old route discontinued. Then it will go to the Department of Transportation for a working over, and once DOT and Amtrak agree, the package will be sent to Congress for its approval. This takes Congress, as well as the Interstate Commerce Commission, out of the train discontinuance business as it relates to passenger trains.")

Is he interested in the new generations of trains now in test or on the drawing boards?

Reistrup: "We will pursue anything that is promising. We are, for example, interested in seeing what Canada's LRC will do. I believe in prototype testing. My philosophy is to go for the latest improvement in technology that's been proven to be successful. But we are not going to the moon. We are running on 1975 track—in the condition that it's *in* in 1975. I am interested in reliability and consistency. The passenger interests me more than some wild high-speed scheme. If you want to go 600 miles an hour, that's fine—but not on the ground.

Is he concerned about the problems facing U.S. railroad passenger carbuilders?

Reistrup: "They certainly did not adequately assess the impact of inflation, and also, perhaps, they did not appreciate the complexity of the designs that some of their customers thrust upon them. They have been the victims of a double whammy. We now have an escalator clause in our contracts. It protects both the builder and ourselves. We want quality and reliability, and our suppliers must come up to the line. But we are going to be fair. You can't run people out of business just to save money.

Does he expect Amtrak can ever be profitable, in dollars-and-cents terms?

Reistrup: "I doubt that, realistically, Amtrak can ever be profitable. Certain segments perform very well—for example, the Metroliners. I suppose the New Tokaido Line is still making money in Japan. But I don't know of any other profitable passenger operations. I don't think the railroad passenger business ever will be profitable as long as the automobile is not paying its full way. It's the automobile that we're competing with. I'd say a third of the people who ride our trains earn under $10,000 a year. How in the world are you going to extract from these people the kind of fares that would make trains profitable as long as they believe they can ride more cheaply in their cars?" ■

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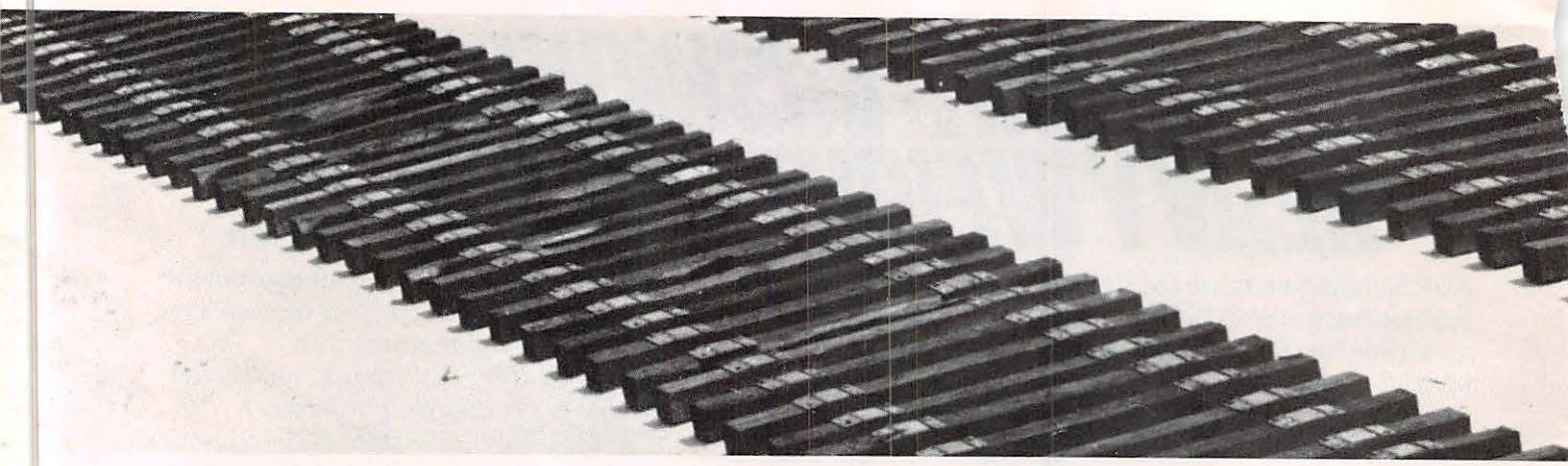


Tie demand nosedives following

By MERWIN H. DICK
Engineering Editor

After boosting the production of crossties substantially last year in response to greatly increased demands from the railroads, tie producers now find that the railroads are deferring many orders placed at that time and are also cancelling others.

In their efforts to increase tie production, the producers were encouraged by talk of long-term commitments on the part of the railroads. Many of them, acting on this encouragement, made substantial investments in new production facilities, and now find themselves shouldering heavy financial obligations. Some of them, as a result of the order cutbacks, are now running into difficulties in meeting these obligations.

These paragraphs contain a capsule version of remarks made during a discussion of the crosstie situation held at Chicago on April 6.

The session was part of a meeting sponsored jointly by the Transportation Materials Management Forum and the Railway Progress Institute.

"The long-range tie market" was the announced subject of the discussion, but the emphasis seemed to be more on recent gyrations of the tie market and the resulting problems for the producers.

Leading off the session were two speakers. One was W. A. Marshall, director of purchases, Burlington Northern. The other was R. S. Hahn, vice president, Kerr-McGee Chemical Corp., Forest Products Division.

Both speakers rather quickly disposed of the announced subject—the long-range tie market— and then went on to other matters that apparently they considered more pressing.

• **Sustained demand was expected.** "If we can believe any portion of what knowledgable people in our industry have been predicting the past couple years, the demand for crossties will be sustained at a high rate for many years to come," said Marshall. "During the 1960's and early 1970's, the annual rate of tie renewals nationally ran approximately 13 to 18 million ties. In 1974, the figure climbed to approximately 20 million. Initial plans were to install 24 million in 1975.

"We've heard many predictions on the future need for ties, with the annual quantities ranging from 28 million to as many as 60 million by the early 1980's. These predictions are based on need, reflecting compliance with FRA standards and replacement of ties put into track during the period of extremely heavy renewals in the years immediately following World War II."

It is generally conceded, said Marshall, that "even with relatively poor economic conditions, the demand for ties from now on, for several years to come, will be considerably higher than in the past decade, probably in the range of 25 to 30 million ties." This same range of annual tie requirements was mentioned by others during the session.

• **Cutbacks are focus of discussion.** But the main thrust of the discussion seemed to be the sharp cutbacks in tie demand this year following hard on the heels of the surge in demand that occurred last year. In fact, the impression obtained from the comments is that the cutbacks were taking place even while the producers were still struggling with bottlenecks that had developed in handling the increased flow of ties.

Describing this pattern of developments, Marshall recalled that the tie market suddenly turned upward in 1974, resulting in the production of about 28 million ties. Then he outlined what happened in these words:

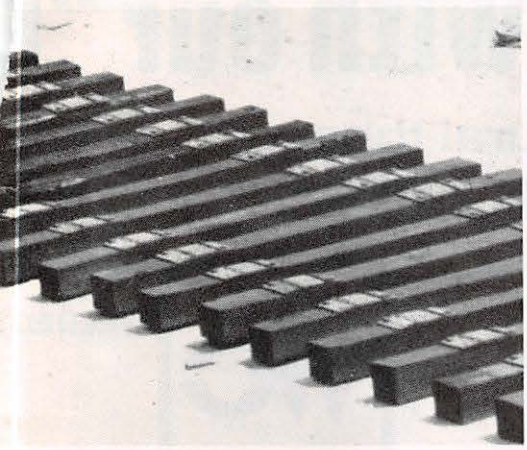
"As everyone who was involved now painfully knows, there was a critical shortage of railroad cars, primarily gondolas, for moving cars to the treating plants. In the absence of this equipment, ties stacked up at production and concentration yards in alarming numbers.

"Then, as economic conditions worsened nationally, suddenly cars were very much available and ties stacked up under load at treating plants everywhere. This caused excessive demurrage charges, embargoes and unbelievable material handling problems at the treating plants. We discovered during this period that neither the railroads nor the treating plants were equipped to handle the volume of ties which is generally predicted to be the minimum volume needed by our industry annually in the years ahead."

• **Millions invested.** In his remarks Hahn described how the tie-producing industry struggled to get production up to meet the increased demand for ties. "Millions of dollars were advanced to producers for timber," he said, "new automated sawmills, trucks and the latest in woods equipment. New automated sawmills were ordered and constructed by the producer-treaters. The treaters also placed on order and constructed automated tie unloaders and other tie-handling equipment to speed up the volume of ties moving into the plants."

After relating the problems encountered in transporting and handling the increased tie production, Hahn turned his attention to the recent decline in the tie market. "Not all so far," he said, "but with most of the major users there has been a complete reversal with regard to crosstie requirements for 1975...The tie producers and wood preserving industry are being asked to delay, defer, and, by some few, to cancel orders or shipments for which the crossties are on hand or for which obligations have been made for timber or mills or both."

• **Deterioration worst in memory.** Noting that the "drastic" reduction in crosstie requirements by railroads is due to the severe decline in revenue, Hahn said he had been in the wood preserving and production industry for 38 years, "but I do not recall any time in the past when there



DISCUSSION of recent developments in the tie market was led by Robert S. Hahn (left), vice president, Kerr-McGee Chemical Corp., Forest Products Division, and W.A. Marshall, director, purchasing, Burlington Northern.

last year's surge

has been such a rapid deterioration of the tie market."

Hahn then related the results of a study made by his company some years ago in an effort to determine a basis for forecasting the future tie market. The study involved 14 major railroads and covered a period of 35 years. "If you could review the charts covering those rail lines you would see," he said, "as we did, that the actual need for ties does not relate to actual insertions and has no meaning...

"The insertions relate to the revenues, as I suppose they must."

● **Stabilized production needed.** The problem of stabilizing tie production came in for considerable discussion, Marshall stated the problem in these words: "Our experience in the recent past should teach us that if the railroads expect to have the needed ties available in the decade ahead, we will have to find ways to stabilize the production of crossties at a fairly constant, but possibly gradually increasing, rate. Our industry has always been plagued by the cyclical nature of tie demand. When demand for ties is high, the production industry seems incapable of meeting the demand. Conversely, as demand decreases, there usually seems to be surplus production."

Marshall is convinced that "generally railroad managements are inclined to over-react to the fluctuations in business at both ends of the business cycle. When business is good we place orders for more ties than are required or can conceivably be produced, and when business is poor one of the first things we do is cut off the production of crossties. As I see it, our goal as railroad purchasing managers should be to place tie orders at a fairly constant rate consistent with our actual needs. In other words do not over-buy in good times and continue buying during poor times. I realize it's easy for me to make these statements, and it may well be quite another thing for purchasing managers to convince our respective railroad managements that this is what must be done."

Are long-term contracts the answer? Apparently not, if Marshall's experience is any criterion. He recalled that at a similar meeting a year ago the consensus of opinion was that long-term contracts for ties, possibly 5 to 10 years, would do much to stabilize the production of crossties. "As a result, many of us entered into long-term agreements, thereby recognizing those producers who are dedicated to the production of ties. I fear, however, that most of us placed far too many orders with companies who will cease tie production the minute the lumber market begins to tighten up. With the exceptionally good tie production which developed in the second half of 1974 and early 1975, along with decreased earnings of most of our railroads, many of us now find ourselves in a position where it is difficult to honor the long-term commitments we eagerly entered into last year."

Later during the meeting Marshall stated that it is the purchasing department's responsibility to keep management advised of the problems of "start and stop" buying. Management should be persuaded to keep taking ties at some rate, he said.

● **What about partial payment?** Frank J. O'Rourke, vice president, Gross & Janes Co., noting that some railroads honor long-term contracts and some don't, wondered if it would be possible for the tie people and the railroads to work out an arrangement under which at least partial payments would be made for tie orders rather than "just chopping them off."

Progress is apparently being made on the Canadian National in achieving a degree of stabilization in tie purchases. P. J. Levins, CN system manager-purchases, noted that tie purchases of that road over the past 20 years had ranged from a low of 500,000 to a high of 5 million, and said that puchasing had strongly recommended to management that the road commit itself to an even flow of 3 million ties per year. He added that authority had been received to schedule upwards of 4 million ties for 1975.

● **Serious money problems.** George Juengel, president, Gross & Janes, said that many of the smaller tie producers, who had invested capital in their plants in an effort to meet the urgent demand of the railroads, are now about to get into serious money problems. The railroads have cut back on orders and the operators need the money to pay their bills, he said.

R. B. Dehls, manager railroad sales and planning, Koppers Co., Inc., Forest Products Division, reviewed the current problems being encountered by tie producers, and told the railroad men present: "We've got a problem and when we've got a problem you've got a problem, and we're going to have to work it out together."

One of the problems discussed was the loss of production that would occur if tie producers were forced out of business by lack of orders. E. R. Englert, assistant director purchases, Louisville & Nashville, expressed the view that railroads should protect their tie sources in their own self interest. The producers, he said, can't go on producing ties without assurance of a market.

R. R. Wingard, president of the Railway Tie Association, has a more hopeful view of the tie market than some of those expressed at the meeting. Wingard, who is assistant vice president and marketing manager of Koppers' Forest Products Division, said that "the basic need for crossties has certainly not changed, although the ability of the railroads to pay for them has temporarily changed. Any reasonable upward movement in the general economy will cause an upward movement of railroad revenues and result in an improvement in the market for ties." He expects the economy to show improvement later this year. ■

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Mitchell R. Gillenwater
Union Tank Car

Suppliers

David F. Banks, plant manager, **McConway & Torley Corp.,** Pittsburgh, Pa., has been elected vice president-manufacturing.

Mitchell R. Gillenwater has been appointed vice president-fleet operations, **Union Tank Car Co.,** and president of **Lithcote Co.** He was formerly vice president, Lithcote.

Loren L. Raglin, manufacturing manager, **Granger Associates,** Menlo Park, Calif., has been elected vice president.

Richard A. Rinaldi, manager of manufacturing, Power and Control Operation, **General Cable Corp.,** Union, N.J., has been named manager of marketing and marketing services.

Andrew B. Carlton has been named director of personnel, **REALCO Services Inc.** He was formerly corporate personnel director, **Daubert Chemical Co.**

Elvin R. Beck, field engineer, **Edison Battery Division, McGraw-Edison Co.,** Bloomfield, N.J., has been appointed manager-rail transit.

Walter H. Carlson has been elected vice president of development, **Ringsdorff Corp.,** East McKeesport, Pa. He was formerly general manager of Ringsdorff's affiliate, Engineered Metals.

Lawrence W. Ingold, vice president-sales, **Pittsburgh Forgings Co.,** retires May 15, after 38 years of service. **William E. Latta,** vice president-manufacturing, elected executive vice president. **Paul B. Evers,** product manager-forgings, named manager of sales-forgings. **Richard S. Buzza,** product manager-railway, agricultural and fabricated products, appointed sales manager-railway products.

Edward F. Heffernan, Jr., group vice president, industrial products, **Budd Co.,** has been appointed senior vice president-operations, reporting to **James H. McNeal, Jr.,** president and chief operating officer. **Rene H. Vansteenkiste,** general manager, Budd Wheel and Brake Division, succeeds Heffernan. **William R. Krauss,** sales manager, Wheel and Brake Division, succeeds Vansteenkiste.

Claude M. Flick has been named manager-operations-car maintenance, and **John J. Lovett** has been appointed manager-administration-car maintenance, **Shippers Car Line division, ACF Industries.**

B.G. Wollard, former shop engineer, system lines, **Chicago & North Western,** is now affiliated with **Tysol Products,** Chicago.

John A. Manning has been appointed sales manager, Eastern Canada, **Transcom Electronics Manufacturing, Ltd.** St. Jerome, Que., a wholly-owned subsidiary of **Lynch Communication Systems.**

Harold G. Strickland, assistant vice president, **L.B. Foster Co.,** has been appointed manager of international sales, with headquarters at Houston. He will be responsible for marketing activities in Africa, the Mid-East, Europe and Latin America.

E. Blake Brenneman, manager of Cobra brake shoe sales, **Westinghouse Air Brake Division, WABCO,** has been appointed general sales manager. **Robert H. Archibald** has been appointed manager of Cobra brake shoe sales and **George W. Gubanich** has been appointed manager of mass transit sales.

Donald A. Albensi, acting manager-plant

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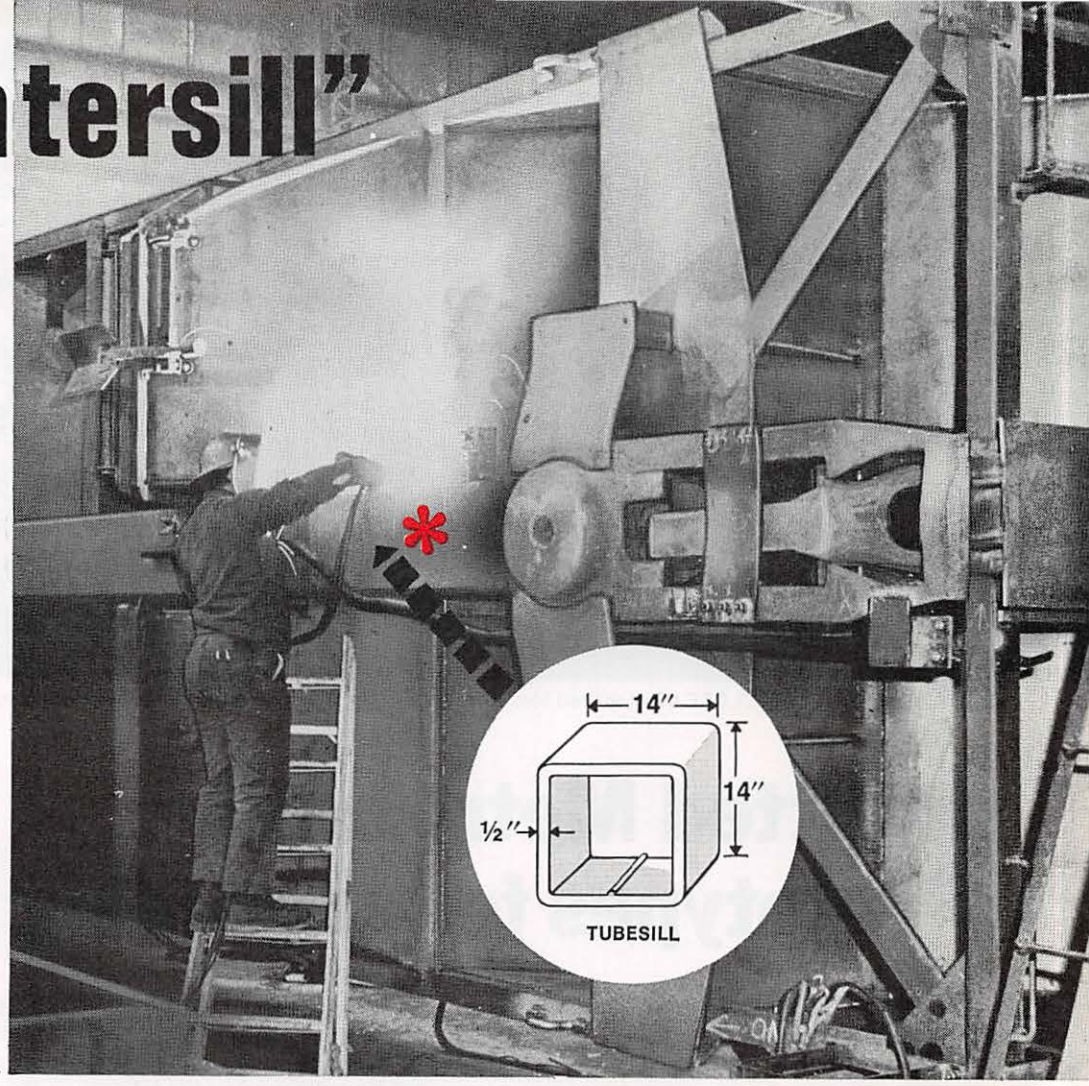


engineering, has been named manager-plant engineering, Westinghouse Air Brake Division, Wilmerding.

Duane M. Hart has been appointed general sales manager-international and **James R. Raspet** has been appointed manager, international marketing administration, **Westinghouse Air Brake Division, WABCO.**

TRANSIT

John T. Harty, director of stores and office administration, **Chicago Transit Authority,** has been named manager of materials management, to succeed **Gerald S. Graybiel,** who will serve as a special assistant, General Finance Division until his retirement Apr. 1, 1976. Mr. Harty's successor is **Edward W. Tobin,** superintendent of stores operations. **Frederick G. King** has been appointed manager of personnel. Mr. King, who will continue to serve as manager of human relations until a successor to that position is named, succeeds **Fran C. Knautz.** Mr. Knautz will serve as special assistant, General Finance Administration Division until he retires Jan. 1, 1976.

Steward F. Taylor has been elected vice president and named manager, mass transportation department, **Sanders & Thomas, Inc.,** Pottstown, Pa. Taylor joined the firm in 1973 as a transportation consultant.

James D. Toth, assistant manager, civil engineering department, Sanders & Thomas, has been elected assistant vice president. Toth recently was temporarily assigned to the firm's transportation and mass transit department.

Franklin G. Fisher, who joined STV, Inc. consulting engineers, as vice president in 1973, has been named rail transportation marketing specialist for the firm. Fisher will also serve as special projects manager. He is a former vice president-operations and maintenance, **Reading.**

Dalton-Dalton-Little-Newport recently opened three new offices in Atlanta, Philadelphia and Chicago. The firm is designing a $29 million section of the Metropolitan Atlanta Regional Transit Authority's rapid transit system from its office at 1371 Peachtree Street, Atlanta. In Philadelphia (at 13th Street and Chestnut) the firm is planning a rehabilitation program for a 6-mile section of the Southeastern Pennsylvania Transit Authority's Frankford El which serves 150,000 commuters daily. From its Chicago office (at 180 North Michigan Avenue) the firm is designing six substations for the Chicago Transit Authority.

Richard A. Kravitz has joined **Gibbs & Hill, Inc.,** as supervising structural engineer, Transportation and Transmission Division.

Arthur J. Barnes, general foreman of shops, **Cleveland Transit System,** has been appointed superintendent of equipment. **Michael J. McKenna,** general foreman, Power and Plant Department, and rapid transit emergency manager, has been appointed superintendent of power and plant.

John A. Bailey, formerly director, Transportation Center, Northwestern University, and professor of administration, Graduate School of Management, has been appointed vice president, Transportation Division, **Murphy Engineering Inc.,** consulting engineers.

Anthony T. Bruno has become a partner with **ATB Associates,** Minoa, N.Y., equipment design consultants and manufacturers of maintenance equipment for the railroad and rapid transit industry. Mr. Bruno served as chief engineer, **Frank Speno Railroad Ballast Cleaning Co.** for many years prior to joining ATB Associates.

John H. Cetinich has been promoted to principal, **Emerson Consultants, Inc.,** New York-based general management consulting firm. Before joining Emerson, Mr. Cetinich had 28 years of management experience with the **Southern Pacific.**

OBITUARY

J.B. McWilliams, 90, founder of **Railway Maintenance Corp.** and for many years the firm's board chairman, died March 24.

STATION PLATFORM CLOSE UP of refitted Metroliner car shows the new roof installation which houses the dynamic brake resistors.

Refitted Metroliners: Prototypes for upgrading the fleet?

By KENNETH G. ELLSWORTH
Mechanical Editor

Car system reliability for the four Metroliner cars refitted under the Metroliner improvement program of the Federal Railroad Administration offers 90% or better availability as against the 70-75% availability of the original cars.

FRA's Clifford Gannett, division chief, passenger equipment division, Office of Passenger Systems R&D, says, "The cars are essentially new, except for the bodies. We started verification testing last July by putting them in revenue service between Washington and New York on a schedule of two round trips a day, seven days a week. With the modifications made since then, we believe the cars are excellent prototypes for upgrading the Metroliner fleet."

● **What went wrong?** The improvement program started in December 1970 when FRA brought in General Electric and Westinghouse Electric to make a study and analysis of the failures that had plagued Metroliner availability and performance during the first year of operation. The companies spent about six months each in determining areas for upgrading the cars. "We agreed in July 1971," Gannett says, "to go ahead on the basis that engineering, redesign and actual modifications would be undertaken by General Electric for two Metroliner cars propelled by their equipment, and by Westinghouse for two cars propelled by their equipment." The two companies had been subcontractors to Budd for elements of electrical propulsion and control equipment on the original Metroliner.

The Westinghouse contract on this program was $3½ million, while the GE contract ran to $4¼ million. GE performed a number of additional design assignments common to both pairs of cars, such as the air intake shafts. Although each company had the option to proceed with its own solutions to the failure problems being tackled, over-all guidance of the Metroliner improvement program was provided by the input of an FRA R&D technical committee. Membership on the committee included outside consultants and technical experts from Amtrak and Penn Central. Total costs for the improvement project round out at $8.87 million, including payments to private consultants, Amtrak and Penn Central. Another, and entirely separate, activity is the $3.9-million Metroliner ride improvement program.

Of the technical committee work, Gannett says, "We met at least twice a month to review suggestions by GE and Westinghouse engineers for corrective design or engineering, as well as what had been done to improve the car to date. Decisions with regard to successive phases of the program were made by the committee."

● **What's new.** The Metroliner "prototypes" are, indeed, different when viewed either from the outside or inside. The new, raised roofline configuration is a louvered design which houses the dynamic brake resistors and provides a source of clean, filtered air to the undercar equipment. Car interiors were modified in the center to accommodate the installation of ductwork to carry air from the roof intake to the undercar transformer bay which serves as a plenum for the ducts leading to the traction motors, and all propulsion and control groups remaining underfloor.

Major objectives of the program focused on upgrading total car system reliability for the purpose of improving car availability that would, in turn, enable Amtrak to adhere to its schedules. Engineering analyses indicated 9 car sub-systems were to be modified: main power conditioning, propulsion, car training, equipment cooling, suspension and guidance, environmental control, car wiring, and a new subsystem to provide both local car and head-end train monitoring and diagnostics.

Major modifications were made to the main power conditioning, auxiliary power conditioning, propulsion, and car training.

Main power conditioning modifications included a new main power circuit and new semiconductor units with higher rated devices incorporating quick disconnect capabilities and built-in diagnostic plugs.

Auxiliary power conditioning led to improvements of the motor alternator set with circuitry changes for Westinghouse; a rotating rectifier applied to the GE alternator. Propulsion had its major change with the gear ratio moved from 2.36 to 2.81, which drops the cars down to 130 mph from the previously rated 150 mph top speed. Track conditions on the New York-Washington trip dictate the use of maximum scheduled speed up to 110 mph. As Gannett described the refitted

Metroliners, "We have operated the new generation cars up to 154 mph with only a slight overheating of the traction motors. I'm sure that if someone said they should be operated at 140 mph there would be no problem."

Car training brought about modifications making head end control components easily available, because failure of this equipment generally disables an entire train. More monitoring controls are provided to assure speed maintaining and P-signal generation. The former is the process by which the operator's dialed speed is maintained by the train. The P-signal is the tractive effort command to all cars in the train.

All major improvements in the refitted Metroliners, then, deal with electronic and electric equipment in terms of redesign, improvement and relocation. Electronic control circuits have been brought up from the underfloor into the car locker box where they are protected from the elements and accessible for maintenance. Ducts now underfloor are pressurized to protect underfloor control groups. Even if leakage occurs in the ductwork, pressurization will prevent admittance of rain and snow, or other underfloor contamination, into the control groups and traction motors. Dynamic braking elements now on the roof are protected from weather and environmental hazards.

● **Metroliner politics.** When looking at the dollar figure of about $2.2 million per car spent on this Metroliner improvement program, the first question is—Why? Political and economic pressures adversely affected the Metroliner right from the outset of a boldly conceived plan. The Johnson Administration placed great urgency on providing the public with a modern high speed train service between the capital and New York City. Gannett points out that problems with the original Metroliners may have been an outgrowth of the requirements in the specification that went out for bidding. "The supplier," he says, "was asked to furnish not only a car, but a train that could travel 150 mph and have certain acceleration and braking characteristics as well as train control apparatus—all of a highly sophisticated nature. Despite assurances from private experts, we learned that the state of the art with regard to passenger rail cars had been dormant for a decade or more." Implementing the executive order for the high speed train service was, at that time, a function within the Department of Commerce.

Whether the propulsion systems and components included in the original specification exceeded the capabilities of the industry 10 years ago may be a moot question. Gannett thinks not. "If the industry had been given the proper amount of time to develop and test components on a prototype basis, we would not have had all of the problems we encountered later. If we look back and realize," Gannett says, "after the fact—of course—it was along in March of 1966 that the request for bids went out with the stipulation that cars be ready for service in October 1967. Mass producing cars in about a year, and having them tested and ready for service was, as it turned out, unrealistic. Particularly, when we wanted to provide a dramatically different, advanced generation of rail passenger cars."

The four refitted Metroliner cars are distinctly identified as prototypes, in the view of FRA, having been submitted to rigorous analysis in their design and engineering, and now to equally strenuous operational revenue testing.

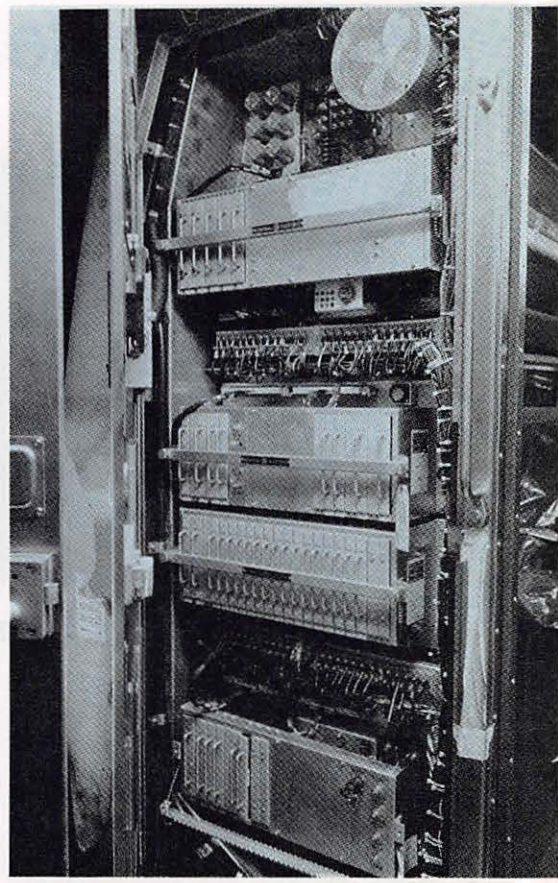
With all the changes made in the propulsion system, Gannett reports, "We doubled our heat load margin. Originally we had about a 15-minute heat load cycle before we started to get into trouble with our electronic equipment. Now we have extended that to 30 minutes which gives a lot of margin for getting behind a freight train, and other 'ups and downs' of normal operations without overheating the equipment.

"A big boost to availability in these enhanced cars," he continues, "is the electronic locker box which has ease of access as well as protection from dirt and weather. And we now have monitoring and failure diagnosis equipment which can be used to check the logic cards to isolate problems or failures quickly for faster repair. The turn-around time of about one hour between a New York-Washington run should be adequate to diagnose and repair most failures that occur. This certainly cannot be said for the Metroliner cars that have not been modified."

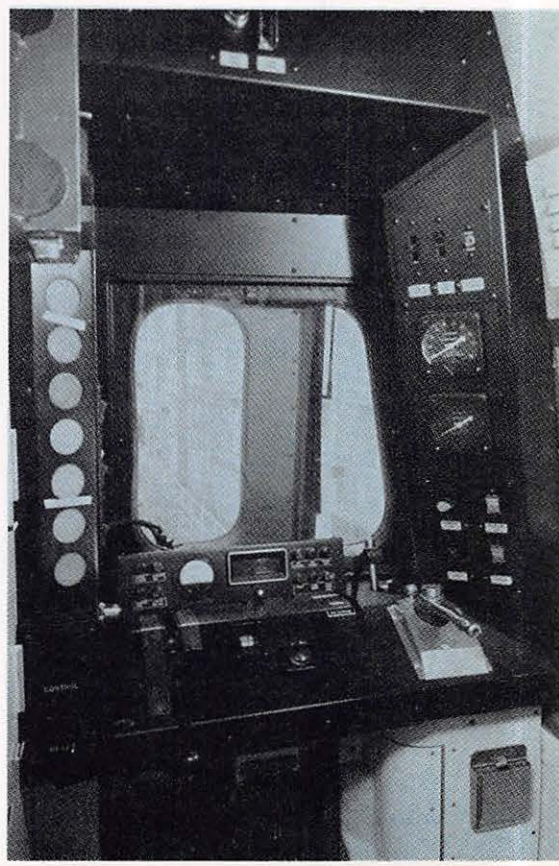
● **The $31-million question.** Applying these modifications to the balance of the 61-car Metroliner fleet carries an estimate of $31 million or $550,000 a car. Amtrak has an order now with Budd Company for 492 Metroliner-type cars (non-self propelled) for locomotive haul at an approximate cost of $430,000 per car.

Acknowledging that these are matters for Amtrak to decide, Gannett points out, "There are some advantages to the electric traction motor cars now in the Metroliner fleet. You can get higher acceleration rates and higher speeds than with the average locomotive hauled cars. To achieve the same kind of performance, or near to it, you have to go to a heavy locomotive with axle loadings around 65,000 lb per axle. The MU-type Metroliner has an axle weight of approximately 45,000 lb.

"Also, the electric Metroliner cars have the advantage of power not only for propulsion but for the auxiliary equipment as well. With a locomotive hauled passenger train, locomotive failure can also affect its on-board power for the train-lined hotel services like air conditioning, heating and lighting. Metroliner self-propelled cars also provide a redundancy of propulsion equipment. The Metroliner train can easily maintain speed with one dead car. A dead locomotive will create all sorts of problems on a busy railroad." ■

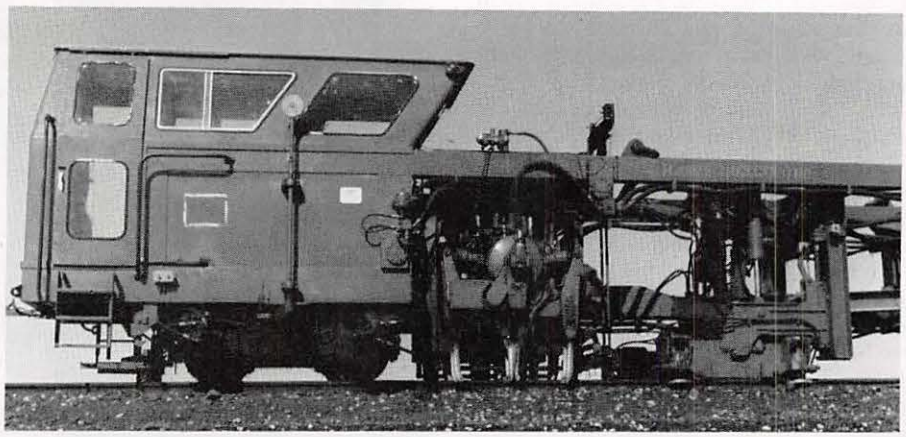


ELECTRONIC LOCKER contains all electronic cards and control circuits brought up from the underfloor.



MODIFIED OPERATOR'S CONSOLE provides more monitoring controls to assure speed maintaining and P-signal generation.

Products Report



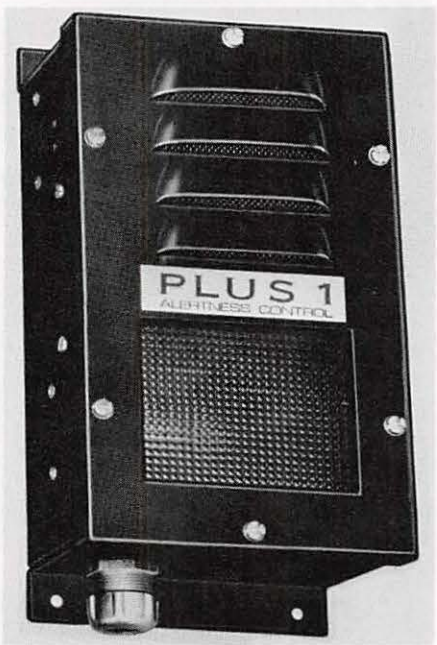
Speed and accuracy increased in this tamper

A new model of the Plasser Duomatic tamper has been introduced. Called the Duomatic 06-32 Special, it is a double-head tamper that tamps two ties simultaneously. A number of new features have been incorporated in the 06-32 Special which are designed to increase the speed and accuracy of the machine.

Among the new features are a longer reference system for automatic control of lifting, lining and tamping. The chord length may be as much as 96 feet for both lining and surfacing. Control of both lifting and lining with servo valves is another new feature. A four-wheel drive as well as an improved lubrication system for the tamping units have been incorporated in the new model.

Both the engine compartment and the cab have been soundproofed. The noise level is now said to be 75 decibels in the operator's cab. In actual service it is reported that the 06-32 Special is showing an average production of 1,800 to 2,000 feet per hour of track raised, lined and tamped.

Circle 60 on reader service card



Control protects train and all aboard if operator is disabled

Twenty-six new GE-built electric locomotives for Amtrak are equipped with Plus I Alertness Controls designed by Vapor Corp. Additional applications of Plus I are scheduled to be made later this year. The device uses integrated electronic circuitry to protect train, passengers and crew if the engineer is incapacitated, but does not add to or interfere with the engineer's normal duties. The control can be used in locomotive, transit car or commuter car operations. To assure that the operator is not inconvenienced by undue alarms, Plus I also detects normal movements whenever the operator is seated. By simply touching or releasing any metal object on the throttle stand or within the cab, Plus I remains assured and will begin a new timing sequence. When standing, the operator can depress a reset button on the control stand or simply touch the seat to acknowledge. Timing sequence of Plus I on the Amtrak locomotives call for a reset within 24 seconds. If no acknowledgement is given, an alarm will sound calling for reset with an additional eight seconds. At that time, assuming no response, a penalty brake application results.

Circle 61 on reader service card

Structural foam has potential for railroad/transit industry

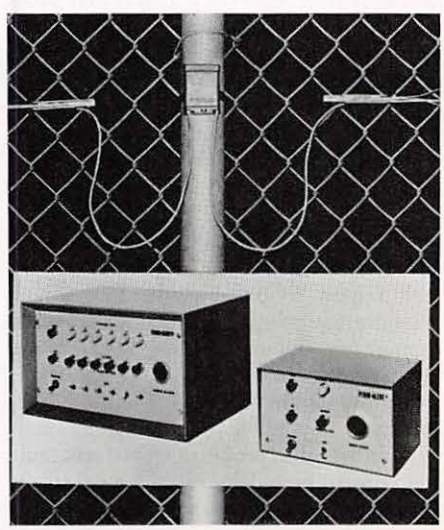
Development of a new generation of reinforced structural foams has been announced by Xentex Co. The material is reported to have higher impact resistance and increased thermal stability compared with other thermoset foams. The foam is used to make large, smooth-surfaced seamless sheets. These Xentex panels are being used in a variety of structural applications: shipping containers, for example. Potential applications, such as on railroad cars and for rapid transit' flooring, are envisioned.

Circle 62 on reader service card

Fabric reduces pumping, ballast cleaning in track construction

Pumping and ballast cleaning in railroad track construction can be reduced with Mirafi 140, a ground stabilization and drainage fabric from Celanese. Mirafi 140 is a durable non-woven fabric made of heat-bonded nylon/polypropylene and polypropylene filaments. It is designed as a water-permeable support material in ground stabilization and drainage applications; it is virtually rotproof and is resistant to alkalies and weak acids. The fabric can be installed in any weather conditions. It uses three performance advantages to reduce construction costs and also to improve performance: separation (isolation of poor subgrade from compatible aggregate); filtration (free passage of water and moisture through the fabric membrane); and reinforcement (reduction of stress within a body by transference of stress along the membrane).

Circle 63 on reader service card



Electro-mechanical system gives tamper-proof security

Perim-Alert is a simple electro-mechanical alarm system for fenced areas from Air Space Devices, Safety Product Division of the Norton Co. Available for

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less than $1 a foot plus installation, it provides tamper-proof, around-the-clock perimeter security wherever there is a chain link fence. The low-voltage, non-hazardous protection system offers a greater degree of reliability than other outdoor intrusion devices, an Air Space Devices spokesman said: Two men with basic electrical knowledge can secure 800 feet of fence a day with Perim-Alert's positive warning system. It can be used to cover a few feet or several miles and can be zoned to pinpoint specific locations where someone is trying to intrude. The receiver-annunciator equipment can be set to activate telephones, horns, sirens, lights or closed-circuit television. The system can be adjusted to virtually eliminate false alarms caused by wind, blowing refuse, birds and small animals. It is unaffected by rain, snow or fog.

Circle 64 on reader service card

NEW LITERATURE

ANTI-CORROSION. Protection of steel parts or products from rust while in production, storage or shipment by wrapping them in chemically coated papers and paper laminates is explained in a new booklet from the Ludlow Corp. Ludlow's VPI wraps may be used in place of oil, wax or grease coatings, and for in-process protection from corrosion of tools, dies, jigs, fixtures and molds.

Circle 70 on reader service card

ALUMINUM FOR MASS TRANSIT. The many capabilities of aluminum in mass transit are detailed in a full-color brochure issued by the Aluminum Co. of America. The fully-illustrated book provides a close look at Alcoa's 80-year experience in the rapid transit field.

Circle 71 on reader service card

RAILROAD EQUIPMENT. "Wheels? Tracks? Or the Things That Make Them Turn?" is the title of a brochure from Caterpillar Tractor Co. which illustrates the wide range of drivetrain components and partial machines available from Caterpillar for use by other original equipment makers. The booklet pictures Cat-built components used in many applications, including railroad locomotives.

Circle 72 on reader service card

TRANSPORTATION CONTROL. A new 22-page, full-color brochure from Westinghouse Air Brake Co. describes WABCO capabilities to design, produce, test and install total systems for transportation control. It discusses WABCO's role as a major innovator in such developments as mass transit controls, computerization of freight car classification yards, automatic braking controls, tread and disc brake systems, electronically operated centralized traffic control, automatic grade crossing controls, automatic train control and total communications.

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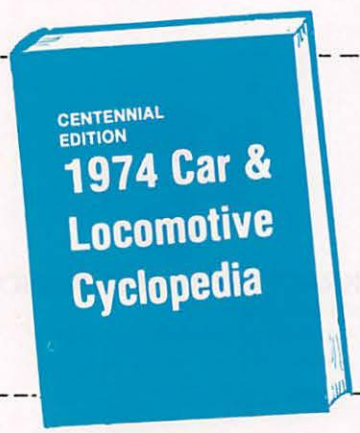

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Moving People: Slow order for BART

(Continued from page 20)

out of service, leaving a smaller, but more reliable, fleet of about 72 A and 142 B cars for regular service. As out-of-service cars are brought up to standard they will be rotated into the operating fleet and other cars rotated out.

Other important parts of the effort to improve BART's vehicle maintenance include expansion of the system's already extensive diagnostic test capability, particularly in the use of portable equipment for on-board testing and change-out of defective components. Expanded maintenance facilities are planned. A 2½-mile test track at BART's Hayward Shop will be complete by late 1975, and may also include an additional maintenance building and pits. On a longer-range basis, expansion of both Hayward and Concord shop facilities is planned to accommodate BART's growing car fleet.

• **Service expansion.** What kind of a schedule does BART have for further advances in its service level? Given the current commitment of the BART staff and board, as well as the California PUC, to the idea that a significant improvement in operating reliability must come first, there isn't any specific timetable for BART service expansion.

Sometime soon the system hopes to convert to the SOR back-up to its ATC system, if only for the additional operation flexibility SOR will afford over the present one-station-separation CABS I back-up system. "I want to go to SOR as soon as possible," says BART Acting General Manager Larry Dahms. But just how soon that will be is going to be dependent on the PUC, which must first approve the use of the new system.

Certainly within the next six months BART expects to make significant improvement in its service quality, but where needed reliability improvements involve major retrofitting or modifications to the entire rolling stock fleet it is going to take longer—a lot longer. "It may take into 1977 for fundamental improvements where the entire fleet is involved," cautions Dahms.

During that six-months to two-year period BART should be able to gradually expand its service level, first with night and weekend operation, then with through Richmond-Daly City operation, and finally with the addition of enough trains operating at reduced headways to provide the Bay Area with the full level of transit service for which the BART system was designed.

Certainly no one is going to be very happy with that kind of outlook for BART service expansion. It has been a long wait already. But as the thousands already riding the system can attest, the wait is worth it. ■

75 YEARS AGO IN

The Railway Age and Railroader

(May 4 and May 11, 1900)

It sounds like the old times of 1885 and thereabouts when trunk line railways thousands of miles long were being proposed, and built, too, to hear Mr. Stilwell talk of his Kansas City Mexico & Orient enterprise. The road is to run in an almost direct line from Kansas City to the Mexican coast at Topolobampo—and the name of the terminus has already been changed by Mexican law to Port Stilwell; it is to cost about $25,000,000, not including steamship lines; the capital is all in sight and eastern capitalists who wanted 40 percent of the entire stock have been refused; the road will cut through a mining region 600 miles long and through a vast territory in which cotton, sugar cane and many cereals grow in semi-tropical profusion, while coalfields of unlimited extent will supply the chief lack of Mexico, cheap fuel. It is to shorten the distance from Kansas City to the Pacific Coast over 300 miles, and will lessen the water passage to Hongkong 1,800 miles. "And out westward from Port Stilwell toward the setting sun," says the Kansas City Times, after an interview with the originator of this great undertaking, "is all the golden promise of the Orient—of Japan, China, the Philippines and the Hawaiian islands. The new road is to run through a land of promise which is yet undeveloped and is to open out into the treasures of the mysterious East." American manufacturers and contractors may well hope that Mr. Stilwell's bold project will be realized, and that, as he states, "it will be only a matter of time before active work is begun." If capital is eager to furnish the money the road will be built. Is it?

***

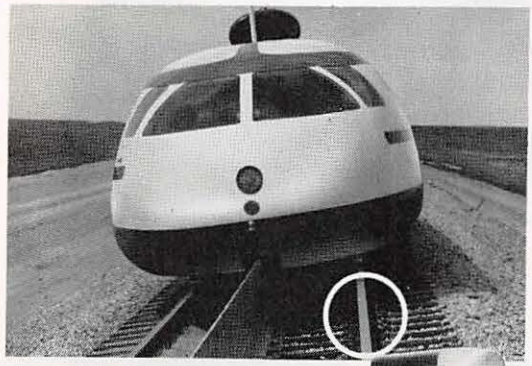
Another run record; this is on the Burlington with the fast mail, on April 30. Distance, Burlington to Chicago, 206 miles; time of run, 203 minutes; actual running time, excluding stops, 189 minutes. Fastest runs between stops, 79.7 miles in 71-1/2 minutes; 37.4 miles in 35 minutes.

***

In a published interview with an officer of the Southern Pacific attention is called to the increase in the cost of freight equipment and its bearing upon operating expenses. For example, it is said that "while some time ago a car of a certain capacity could be bought for $495, such a car today costs about $650." This is a practical confirmation of the statistical exhibit that was presented in these columns early in the spring. Good testimony is borne to the general prosperity of the country and to the prevailing wise management by the fact that the railroads, notwithstanding the higher operating costs of the present day, are able to report increased net as well as increased gross earnings. The pinch will not come until gross receipts no longer show gains upon the previous year. More will be heard then inevitably about the enhanced prices of all materials and supplies for maintenance.

***

The Atchison Topeka & Santa Fe can now run its trains through from Chicago to San Francisco Bay, a great journey of 2,567 miles. This has long been the ambition of the management, and a dozen or more years ago President Strong forced from the Southern Pacific a contract which gave the Santa Fe running powers over the track of that company from Mojave to Oakland. An independent line, however, was the ideal aimed at, and this has been accomplished by the purchase and completion of the San Francisco & San Joaquin Valley road from Bakersfield north to Port Richmond, opposite San Francisco, 305 miles, supplemented by a contract with the Southern Pacific for the joint use of its track between Mojave and Bakersfield, 67 miles. The San Joaquin Valley road, also, has a branch from Fresno to Visalia, 44 miles; so that the Santa Fe has added 349 miles to its mileage owned, and, including the track leased from the S.P., 372 miles to the length of lines operated. The Atchison Topeka & Santa Fe system now embraces 7,820 miles of lines, extending from Lake Michigan to the gulf at Galveston, to the Mexican border at El Paso, and to the Pacific at San Diego, Rendondo and San Francisco, with a vast mileage of interlacing tracks between.



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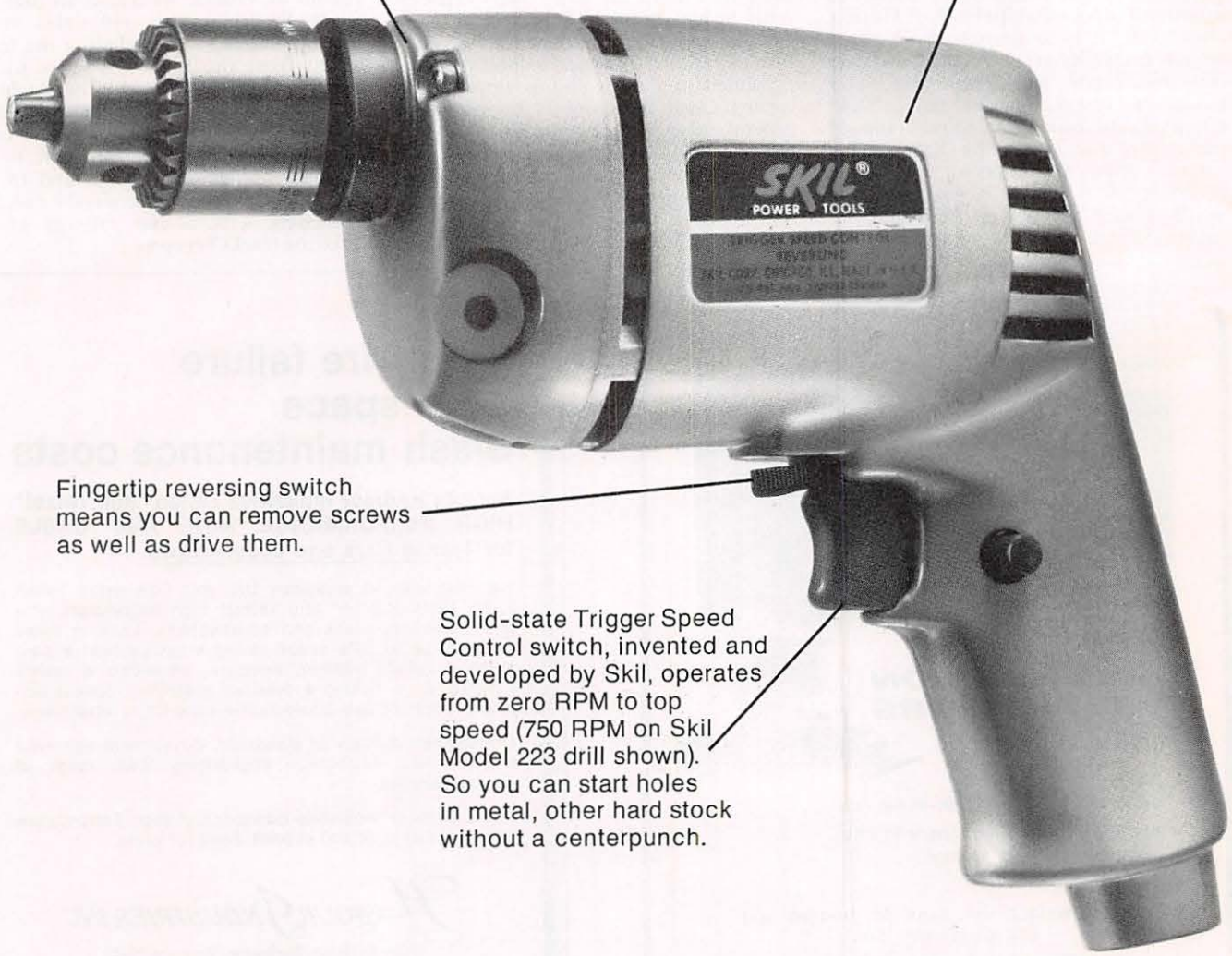

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Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended April 26 totaled 453,784 cars, according to the Association of American Railroads. This was an increase of 6,376 cars, or 1.4%, compared with the previous week, and a decrease of 82,581 cars, or 15.4%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended April 26 are estimated at 15.1 billion, a decrease of 13.1% below the corresponding week of 1974.

REVENUE FREIGHT CARLOADINGS

Commodity	Apr. 26 week	Apr. 19 week
Grain	18,173	19,646
Farm products	7,527	7,622
Metallic ores	32,936	31,865
Coal	96,666	96,173
Crushed stone, gravel & sand	24,039	23,428
Nonmetallic minerals	14,263	14,364
Grain mill products	19,174	18,752
Food and kindred products	20,947	20,669
Primary forest products	17,453	16,330
Lumber & wood products (except furniture)	12,870	12,406
Pulp, paper & allied products	17,540	17,914
Chemicals & allied products	27,057	25,422
Petroleum products	6,822	6,824
Stone, clay & glass products	18,209	17,288
Coke	7,101	7,071
Metals & products	21,894	21,191
Motor vehicles & equipment	21,083	20,458
Waste & scrap materials	14,955	15,369
Forwarder & shipper assn. traffic	8,746	8,174
All other carloads	45,895	46,066
LCL traffic	434	376
Total cars loaded	**453,784**	**447,408**
Cumulative total, 17 weeks	1975	1974
	7,437,061	**8,655,084**
Estimated revenue ton-miles (billions) 17 weeks	248.0	283.2

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended April 19 totaled 22,346 cars (21.6% below the corresponding week last year and 2.7% below the preceding week of this year). Trailers and containers totaled 38,957 (a drop of 20.8% from 1974 and 0.1% above the preceding 1975 week). Cumulative volume for the first 16 weeks of 1975 is 359,132 cars (28.7% below 1974), and 618,449 trailers and containers (29.4% below the comparable period of last year).

IN CANADA

Canadian railway revenue freight loaded in the 7-day period ended April 14 totaled 4.5 million tons (up 1.1% from the preceding week). Cars loaded decreased 1.4% to 77,023. Cumulative loadings for 1975 were up to 60.2 million tons (down 1% from 1974).

● *Burlington Northern.*—The 1975 track program includes installation of 2.7 million ties and 407 miles of welded rail. Since the merger which created BN in 1970, maintenance of way expenditures have exceeded $863 million, averaging 16% of total revenues. Last year 6,154 miles of roadway were surfaced and ballasted, nearly 2.2 million ties replaced and 430 miles of rail relaid.

● *Montreal Metro.*—Placed an order with Cincinnati Time Recorder Co., a unit of General Signal Corp., for 193 Transfer Machines at a cost of more than $750,000. The machines issue timed and coded transfers to passengers.

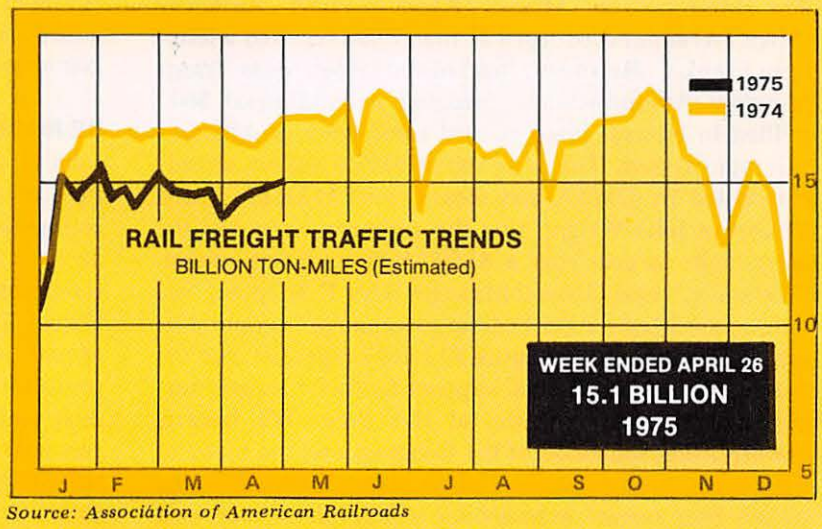
● *WMATA.*—Awarded a $34.9-million contract for construction of the Yuma Street (N.W.) subway segment to the joint venture of Morrison-Knudsen, Boise, Ida.; American Structures, Annapolis, Md.; and J. Rich Steers, New York City. The twin rock tunnels will carry Metro trains from about 35th St. in upper Northwest Washington, under Yuma Street and then under Wisconsin Avenue to the District line.

● *Freight-car orders and deliveries.*—The following report has been received from the ARCI and the AAR:

DELIVERED	Mar. '75	Feb. '75	Mar. '74
Built new by carbuilders	6,794	5,538	5,112
Built new in R.R. shops	153	161	243
Built new—total	6,947	5,699	5,355
Rebuilt	38	172	23
TOTAL DELIVERED	**6,985**	**5,871**	**5,378**

ORDERED			
To be built new by carbuilders	4,021	2,031	10,345
To be built new in R.R. shops	0	0	169
To be built new—total	4,021	2,031	10,514
To be rebuilt	2	48	500
TOTAL ORDERED	**4,023**	**2,079**	**11,014**

ON ORDER AND UNDELIVERED	Apr. 1, '75	Mar. 1, '75	Apr. 1, '74
To be built new by carbuilders	67,472	72,156	74,493
To be built new in R.R. shops	10,719	10,872	4,232
To be built new—total	78,191	83,028	79,725
To be rebuilt	741	777	1,018
TOTAL ON ORDER	**78,932**	**83,805**	**80,743**



Source: Association of American Railroads

Moving People

AUTOMATED RAPID TRANSIT FOR DENVER?

After an intensive study of various transit "options" (RA, Feb. 10, p. 48), the staff of Denver's Regional Transportation District has recommended that RTD build an automated rapid-transit system using vehicles seating 30 persons or less. RTD's executive director, John D. Simpson, told the District's board of directors on April 24 that such a system could be built within the $425-million bonding authority approved by Denver area voters in 1973, along with matching Federal funds. Said Simpson: "We have the capability to complete not only a high-quality automated rapid-transit system primarily covering 73 miles of fixed guide way, but to begin work on secondary segments of extension with 44 stations and a total capital cost of $.1.35 billion, after completion of the primary system." Among other proposals studied by the RTD staff were light rail and an all-bus system. The RTD board will hold a public hearing on the staff's recommendations on May 22.

ITALY TRIES SELF-SERVICE DINERS

The first of 20 self-service restaurant cars which Fiat is building for the Italian State Railways is in service between Milan and Venice. The Fiat car is divided into a dining room, which takes up two-thirds of the available space, and a food-service counter and bar, which occupies the remaining third. Fiat says 300 meals can be served in various shifts to 39 persons at a time, seated at individual tables in small swivel armchairs. Individual servings are vacuum packed in cellophane. Both heating and refrigerating units are available in the car to prepare the food or maintain it at low temperatures. U.S.-equivalent prices are $1 for breakfast and $4 for lunch or dinner.

UMTA PLEDGES $600 MILLION FOR MARTA

The Metropolitan Atlanta Rapid Transit Authority (MARTA) announced April 21 that it had received a letter from Frank C. Herringer, head of the Urban Mass Transportation Administration, pledging an additional $600 million in Federal funds toward completion of Atlanta's rail rapid system. This is on top of $199.9 million already committed by UMTA and means, said MARTA Board Chairman John Wright, that the authority "now has the green light to construct a $1.017-billion transit system. "Naturally," said General Manager Alan F. Kiepper, "we would have liked for the Federal government to commit itself, at this time, to our entire $2.1-billion project, but the reality of available Federal support funds for transit purposes makes this realistic, at this time. We believe, however, that the mood of the Congress and the mood of the people throughout the United States toward favoring transit over private automobiles will result in increased Federal spending for transit by the time we are ready to need additional funding, and we will certainly avail ourselves of that additional money." Kiepper said MARTA is now studying "the extent to which current planning will be changed," one of the prime considerations being the number of transit cars that will be needed for the funded portion of the system. Meanwhile, he said, construction of Phases I and II of the system will continue on schedule. The first segment is to open early in 1979.

CUBIC WESTERN WINS WMATA CONTRACT

The Washington Metropolitan Area Transit Authority has awarded a $44.3-million contract for production and installation of 1,200 pieces of automatic fare collection (AFC) equipment to Cubic Western Data of San Diego, Calif. An earlier contract for 805 pieces of AFC equipment went to Control Data Corp. of Minneapolis, for $17.2 million. Six months ago WMATA sought competitive bids for the balance of the AFC system. Control Data's price for the total system was $78.9 million, including the original 805 units. Cubic's proposal for the balance of the system was $44.3 million, and it was the proposal that WMATA accepted.

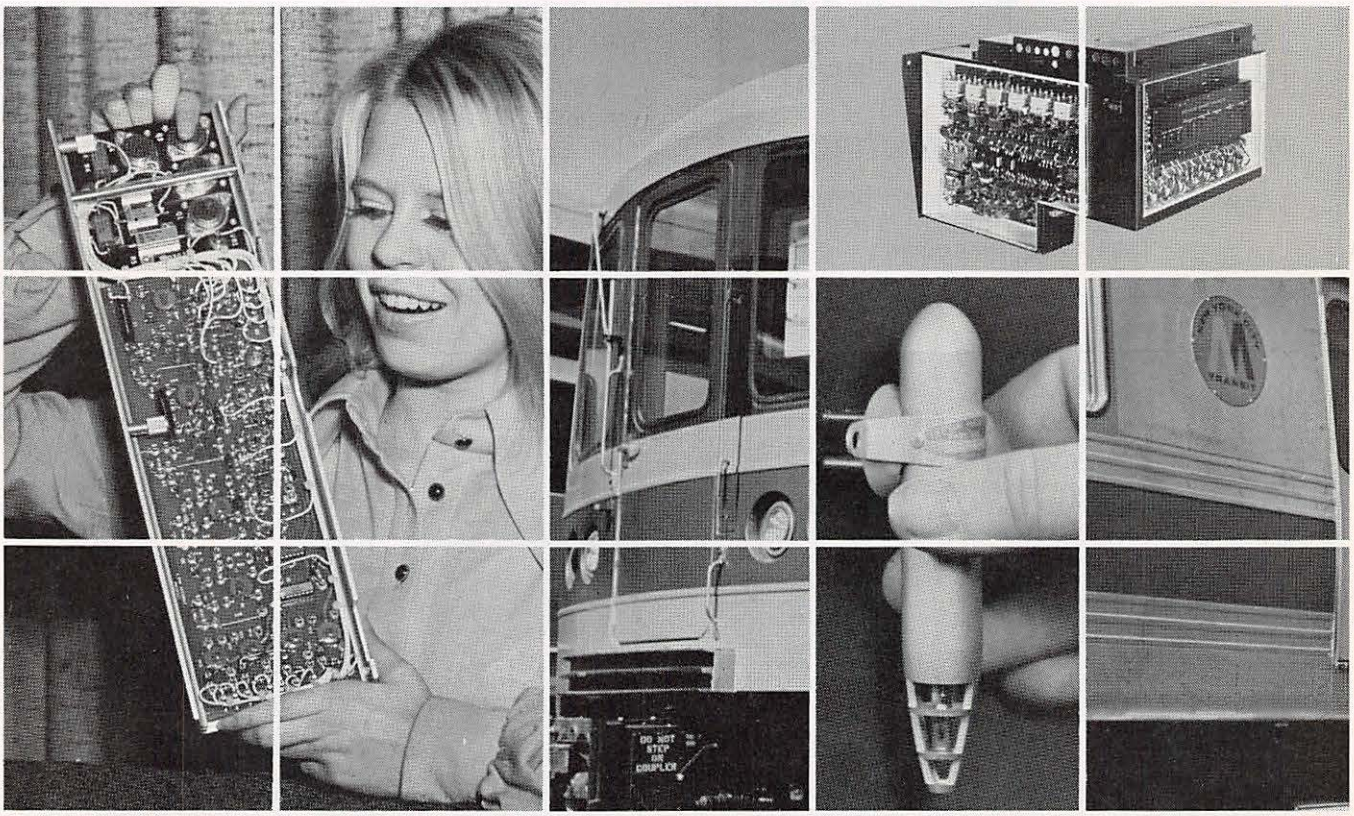
FEA SEEKS GREATER USE OF RAIL, BUS

The Federal Energy Administration has awarded a $100,000 contract to Aerospace Corp., El Segundo, Calif., to study ways of encouraging more inter-city travelers to use rail and bus. "Currently, 25% of all energy used in the U.S. and 50% of the petroleum we consume is used in transportation." said Roger W. Sant, FEA Assistant Administrator for Conservation and Environment. Among the strategies which FEA wants studied in its effort to encourage greater use of the more energy-efficient modes are: improved rail and bus schedules, rail and bus-fare subsidies, air-fare surcharges, air-service curtailments, auto-fuel pricing, automobile speed limits, and changes in common-carrier fuel prices.

DE ROOS NAMED NYCTA SENIOR OFFICER

John G. de Roos has been appointed senior executive officer of the New York City Transit Authority. General counsel of the Transit Authority for the past four years, de Roos has been active in the top management of public transportation in New York City since 1969. He succeeds Daniel T. Scannell, who retired April 26. Scannell has agreed to serve the Transit Authority as a part-time consultant through the period of labor negotiations early next year. Existing contracts with the major unions expire next March 31. Scannell has entered the private practice of law with the firm of Hale and Russell in New York City.

If you have to make environmental control decisions, don't lose your 'cool' (or your heat) go with experience, go for economy, go for dependability, go for proved in service, off the shelf components, customized to meet your specifications. Go for total control system capability—Go for Vapor.



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Viewpoint

That silver lining seems to be in sight

In view of first-quarter results, you couldn't blame railroad chief executives if they paraded around wearing the mask of tragedy, spreading gloom and uttering dire predictions. So are they doing that? Hell, no. Here's a sampling of what they're actually saying:

—"We're confident that the worst of the current economic recession will soon be behind us and that a renewal of economic growth will follow."

—"We've seen some evidence recently that the economic downturn may have bottomed-out."

—"With inventories declining faster than production, we anticipate the movement of many types of consumer goods to begin increasing during the latter part of the year."

—"The evidence is becoming increasingly clear that the economy will gradually strengthen as the year moves ahead."

—"The erosion of freight carloadings appears to have halted.... When volume returns, operating costs will not increase proportionately. We anticipate a recovery as volume increases."

—Company economists interpret an April strengthening in certain commodities "as a sign that an upturn in business activity could be under way in our region."

—"The outlook for rail earnings appears much more favorable for the balance of the year."

Even more persuasive, however, are things rail customers are beginning to say. Take just one, a company with 154 facilities in the United States, a company which ships about 70% of its freight tonnage by rail—a company called General Motors.

Nobody needs to be told how sharp the drop in automotive traffic has been. But—it is GM's thinking now that by yearend the industry will be selling cars at a 9.5-million-unit annual rate, with total car-and-truck sales for the year of 11.6 million units, close to the 1974 total. And as for the longer term, GM is confidently looking to industry sales of nearly 16 million cars and trucks by 1980.

"WE ARE BUILDING UP MOMENTUM"

Listen to Richard L. Terrell, general manager at Electro-Motive just 10 years ago and now vice chairman of GM:

"We are building up momentum to get this country moving again. The sharp first-quarter drop in GNP was a measure of the severity of the recession, but the decline resulted mostly from liquidation of inventories—and that's a positive sign, because economists read the sell-off of excess inventory as a prelude to recovery.

"There are other hopeful indicators. Interest rates are down sharply. Prices of many basic raw materials are moderating. Wholesale and retail price indices measure the slowing of inflation. The Consumer Price Index increase has braked, while the Consumer Confidence Index has moved up for the first time in months....

"I sense that the mood of the country is changing. The patient hasn't shaken the sickness completely, but the patient is recovering—and, what is just as important, the patient knows it and expects a full recovery.

"As for the auto business, progress is already apparent—and the prognosis is good."

And GM? GM, says Dick Terrell, "intends to continue to have a big chunk of the business—and railroads will continue to handle a big chunk of our transportation requirements."

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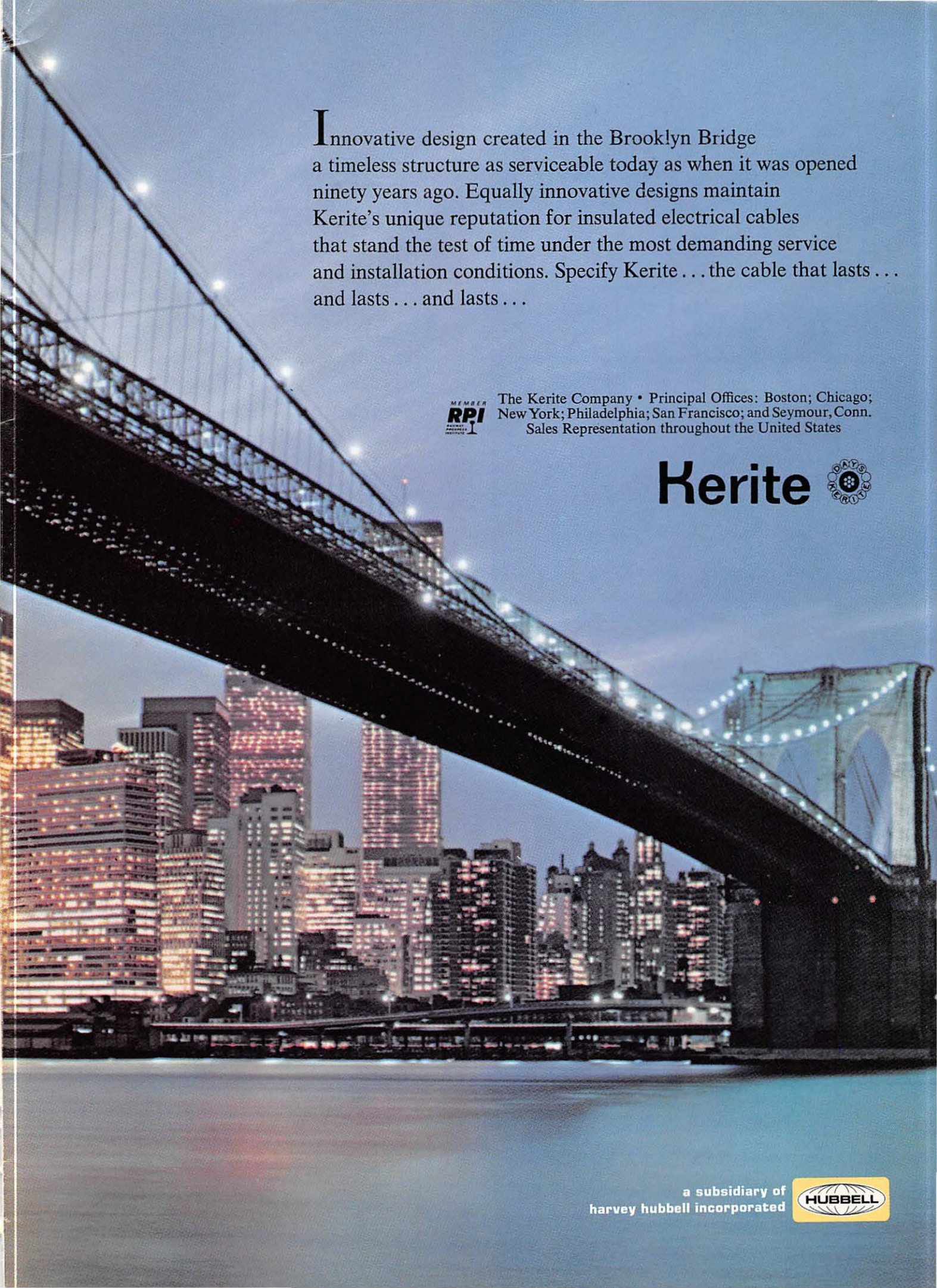

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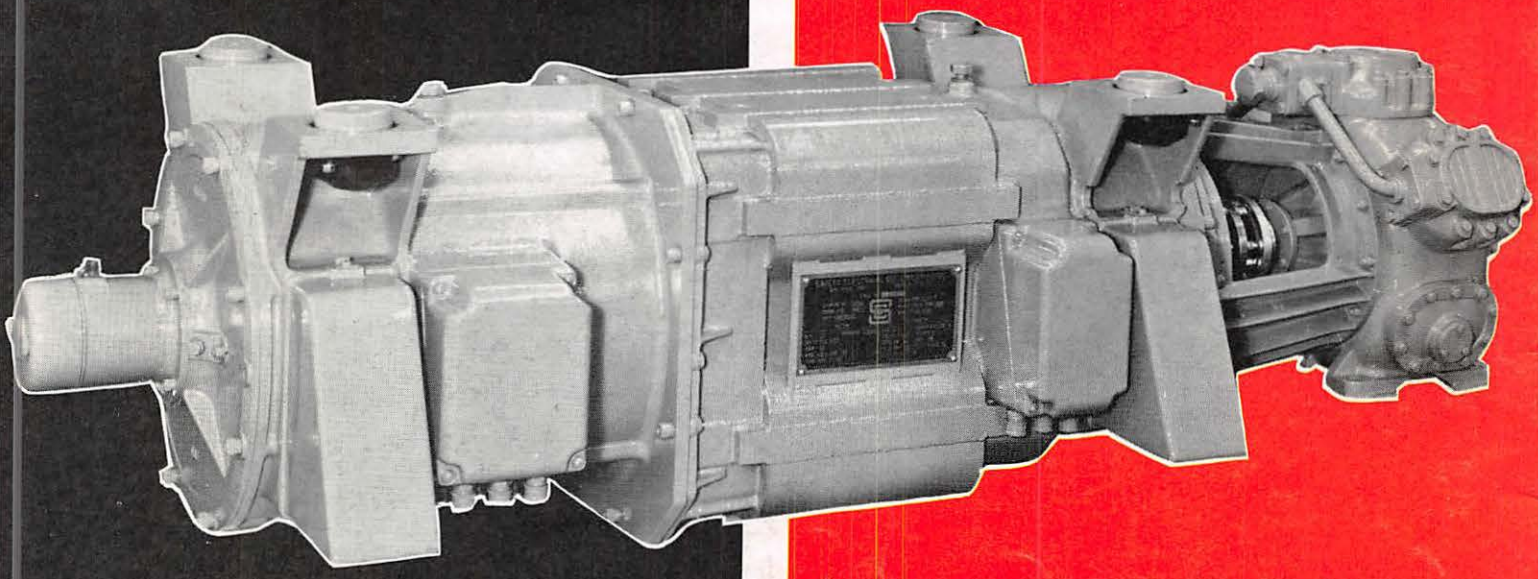

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